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The Journal of The SOUTH CAROLINA Medical Association

Fingernail Necrosis

X-Ray Film of the Month

Hypercalcemia and Cancer

Graduate Medical Education

Neurilemmoma of Broad Ligament

Pros and Cons of a Second Medical School

LUME 63 JANUARY 1967 NUMBER

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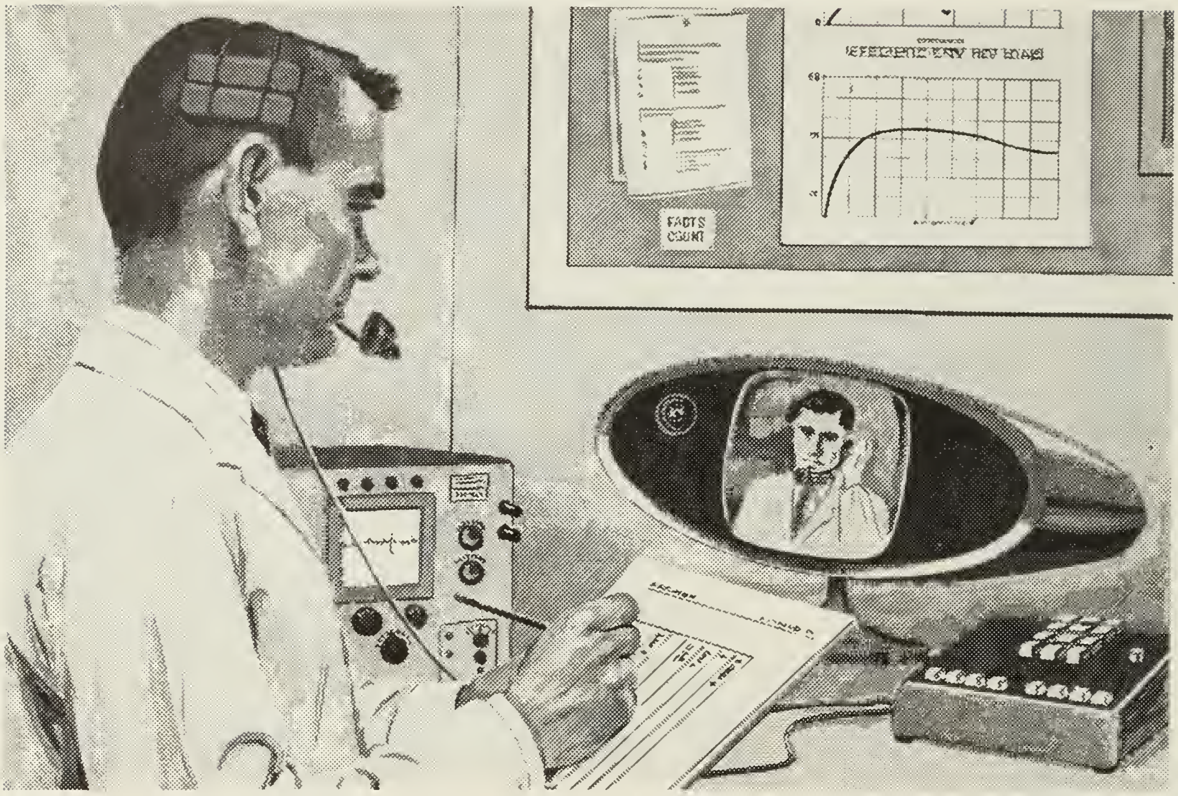

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The views expressed in this publication are those of the writers and do not necessarily reflect the opinions of the South Carolina Medical Association.

Contributions of Original Articles

Length—short articles of about 2,500 words (about 8 typewritten pages, double spaced) are preferred. Longer articles ordinarily will defer to the shorter ones in schedule of publication.

Manuscripts—Manuscripts should be typewritten, double spaced, and the original and a carbon copy submitted.

Illustrations—Ordinarily publication of 4 small illustrations or the equivalent accompanying an article will be paid for by The Journal. Any number beyond this must be paid for by the author except under unusual conditions. Illustrations should be sent as glossy prints or graphs in black ink with lettering large enough to show after reduction.

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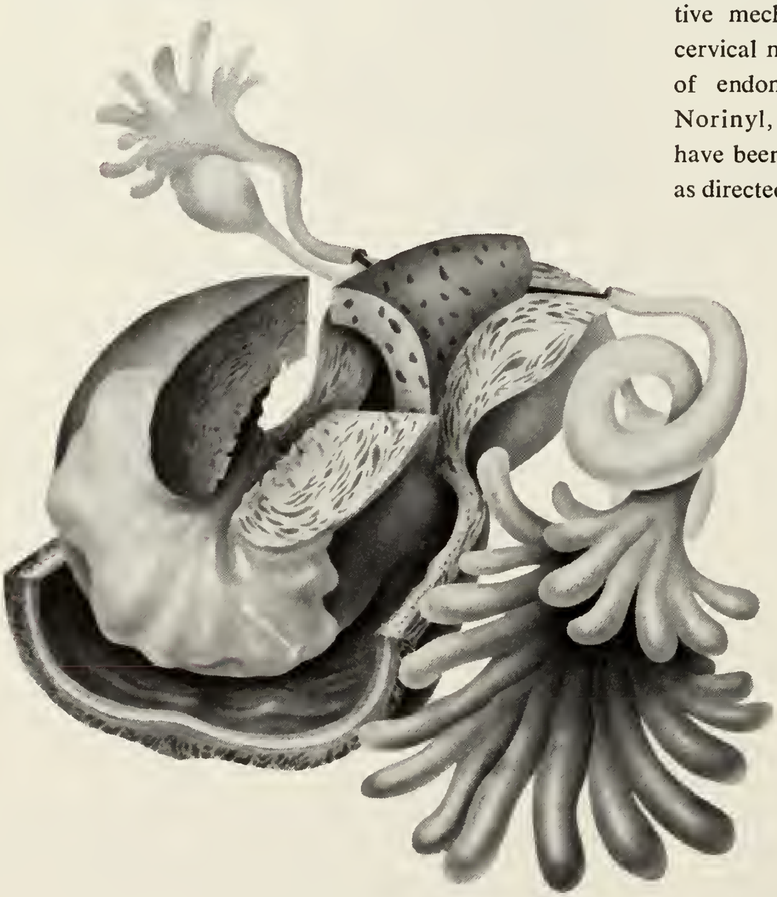

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Side Effects: Intermenstrual bleeding; amenorrhea; symptoms resembling early pregnancy, such as nausea, breast engorgement or enlargement, chloasma and minor degree of fluid retention (if these should occur and patient has not strictly adhered to medication plan, she should be tested for pregnancy); weight gain; subjective complaints such as headache, dizziness, nervousness, irritability; in a few patients libido was increased. In a total of 3,090 patients, 2.2% discontinued medication because of nausea.

NOTE: See sections on contraindications and precautions for possible side effects on other organ systems.

Dosage and Administration: One Norinyl tablet orally for 20 days, commencing on day 5 through and including day 24 of the menstrual cycle. (Day 1 is the first day of menstrual bleeding.)

Availability: Dispensers of 20 and 60 tablets; bottles of 100.

References: **1**. Council on Drugs. JAMA 187:664 (Feb. 29) 1964 **2.** Bryans, F. E.: Canad Med Ass J 92:287 (Feb. 6) 1965. **3.** Goldzieher, J. W.: Med Clin N Amer 48:529 (Mar.) 1964. **4.** Cohen, M. R : Paper presented at Symposium on Low-Dosage Oral Contraception, Palo Alto, Calif., July 15, 1965. Reported in Med Sci 16:26 (Nov) 1965. **5.** Hammond, D. O.: Ibid. **6.** Rice-Wray, E . Goldzieher, J. W., and Aranda-Rosell, A.: Fertil Steril 14:402 (Jul.-Aug) 1963. **7.** Goldzieher, J. W., Moses, L. E., and Ellis, L. T.: JAMA 180:359 (May 5) 1962. **8.** Kempers, R. D.: GP 29:88 (Jan.) 1964 **9**. Tyler, E. T.: JAMA 187:562 (Feb. 22) 1964. **10**. Rudel, H. W., Martinez-Manautou, J., and Maqueo-Topete, M : Fertil Steril 16:158 (Mar.-Apr.) 1965. **11**. Flowers, C. E., Jr : N Carolina Med J 25:139 (Apr.) 1964 **12.** Goldzieher, J. W.: Appl Ther 6:503 (June) 1964 **13.** The Control of Fertility. Report adopted by the Committee on Human Reproduction of the American Medical Association. JAMA 194:462 (Oct. 25) 1965. **14.** Flowers, C. E., Jr.: JAMA 188:1115 (June 29) 1964. **15.** Merritt, R. I.: Appl Ther 6:427 (May) 1964. **16.** Newland, D. O.: Paper presented at Symposium on Low-Dosage Oral Contraception, Palo Alto, Calif., July 15, 1965. Reported in Med Sci 16:26 (Nov.) 1965.

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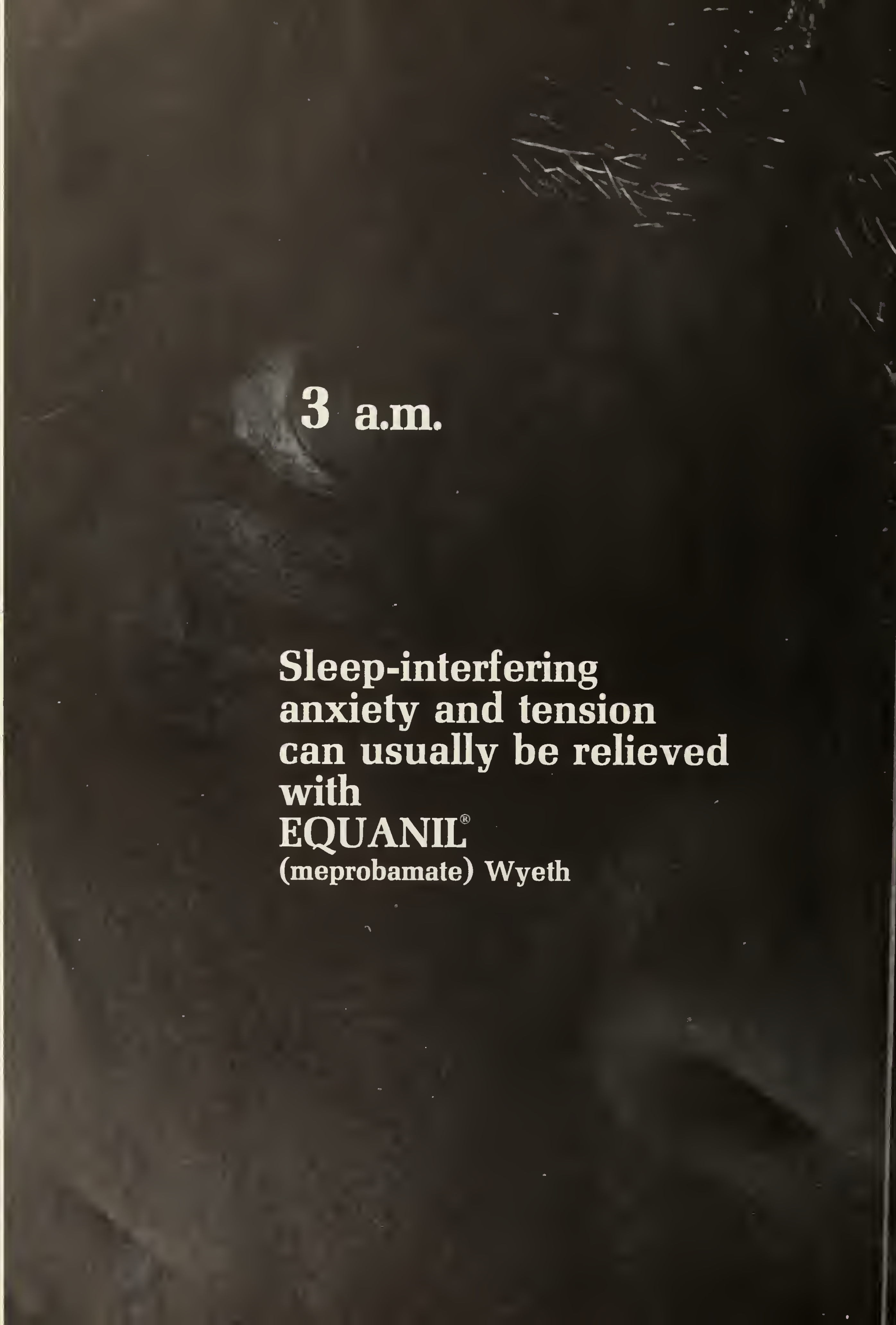
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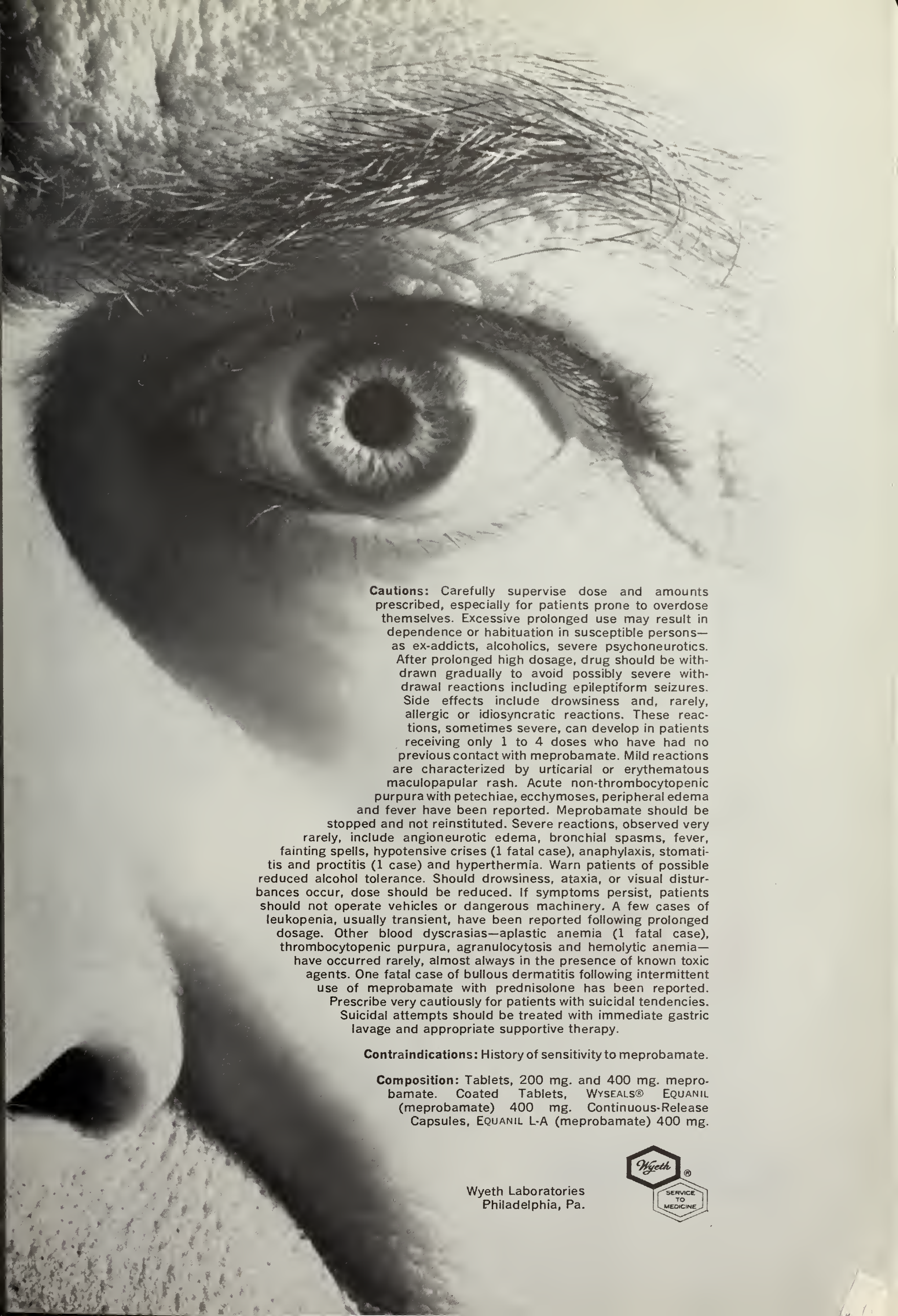

Cautions: Carefully supervise dose and amounts prescribed, especially for patients prone to overdose themselves. Excessive prolonged use may result in dependence or habituation in susceptible persons—as ex-addicts, alcoholics, severe psychoneurotics. After prolonged high dosage, drug should be withdrawn gradually to avoid possibly severe withdrawal reactions including epileptiform seizures. Side effects include drowsiness and, rarely, allergic or idiosyncratic reactions. These reactions, sometimes severe, can develop in patients receiving only 1 to 4 doses who have had no previous contact with meprobamate. Mild reactions are characterized by urticarial or erythematous maculopapular rash. Acute non-thrombocytopenic purpura with petechiae, ecchymoses, peripheral edema and fever have been reported. Meprobamate should be stopped and not reinstituted. Severe reactions, observed very rarely, include angioneurotic edema, bronchial spasms, fever, fainting spells, hypotensive crises (1 fatal case), anaphylaxis, stomatitis and proctitis (1 case) and hyperthermia. Warn patients of possible reduced alcohol tolerance. Should drowsiness, ataxia, or visual disturbances occur, dose should be reduced. If symptoms persist, patients should not operate vehicles or dangerous machinery. A few cases of leukopenia, usually transient, have been reported following prolonged dosage. Other blood dyscrasias—aplastic anemia (1 fatal case), thrombocytopenic purpura, agranulocytosis and hemolytic anemia—have occurred rarely, almost always in the presence of known toxic agents. One fatal case of bullous dermatitis following intermittent use of meprobamate with prednisolone has been reported. Prescribe very cautiously for patients with suicidal tendencies. Suicidal attempts should be treated with immediate gastric lavage and appropriate supportive therapy.

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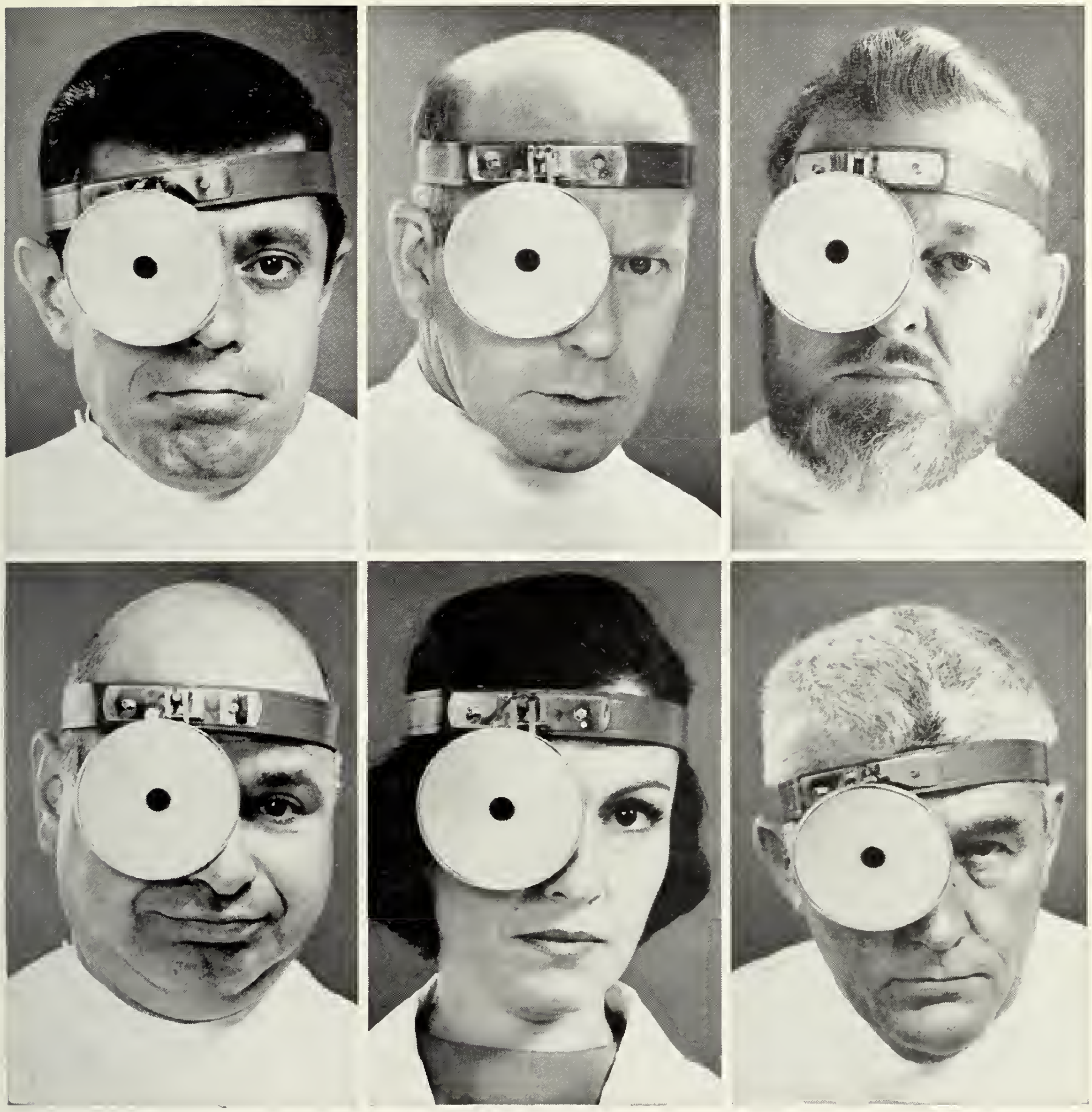

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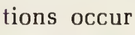

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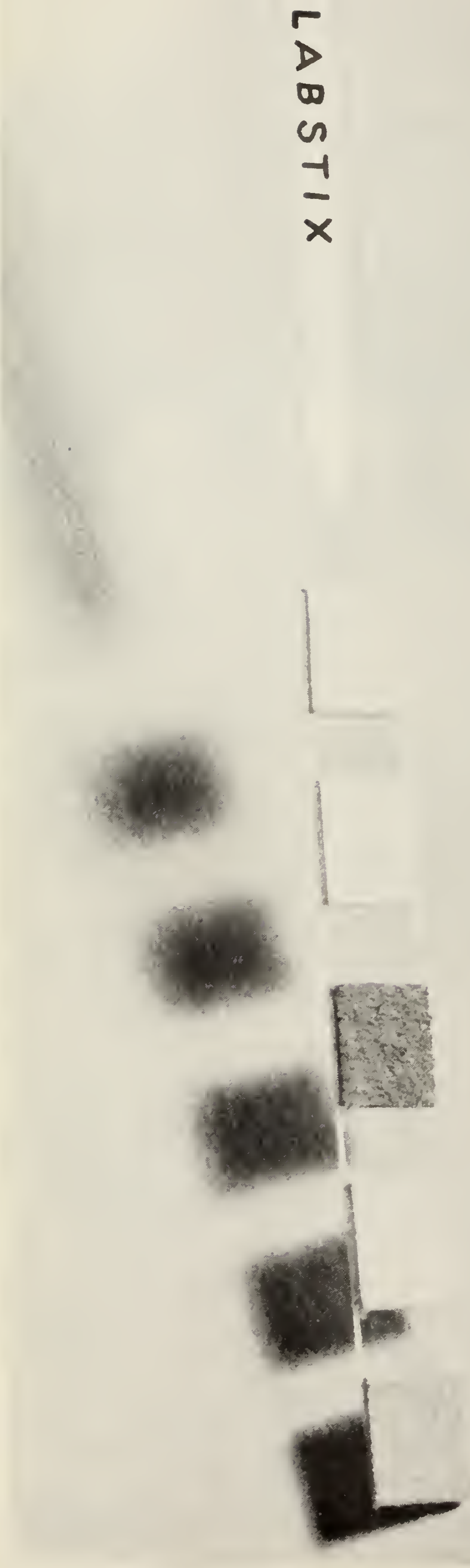

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References: 1. Shuman, C.: Am. J. Med. Sci., 225:54, 1953. 2. Perchuk, E., et al.: Angiology, 12:102, 1961. 3. Rawls, W., et al.: Med. Times, 87:818, 1959.

WALKER *Laboratories* Division of Richardson-Merrell Inc., Mount Vernon, New York 10551 winter 1966

DORSEY Season

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this issue: the nose as a shock organ

the nose as a shock organ

by Charles J. Shagoury, M.D., Chelmsford, Massachusetts

"Is it a cold, hay fever, or has he been reprimanded by his boss?" Occasionally, you will ask yourself this question when confronted by a patient with abrupt onset of rhinorrhea, nasal obstruction, and sneezing. Usually the history will elucidate the problem, but examination of the nose will often provide valuable clues to the correct diagnosis.

The nose is a shock organ in a double sense. First, it is in the nose that the confrontation takes place with the surrounding atmosphere. For twenty-four hours a day, the nose must meet the varying challenges of the inspired air, containing perhaps noxious chemicals, dust, dirt, bacteria, viruses, fungi, and industrial pollutants of all kinds, and render it clean, virtually sterile, and fit for the sensitive alveoli of the lungs. Whatever the temperature or humidity of the atmosphere, the nose must transmit it to the lungs at approximately 98°F, and with a humidity of approximately 40%.[1]

Second, in particularly susceptible patients, the nose acts as a shock organ in a manner totally unrelated to its normal function. Persons with hay fever respond to ordinarily harmless materials by extreme nasal congestion, with marked rhinorrhea and violent spasms of sneezing. In some patients, exposure to threatening or disagreeable agents, or situations involving mental conflict may result in a reaction which is exclusively nasal, with swelling of the turbinates, and marked hypersecretion.[2]

Nasal symptoms usually result when the nose seeks to perform its function of getting rid of noxious and dangerous elements in the atmosphere, and prevent their admission to the trachea and lungs. Small particles are removed by the mucous coating which blankets the nasal passages. This mucous blanket contains a bacteriostatic agent, lysozyme, which destroys most air-borne bacteria.[3] The mucinous content renders the surface sticky, causing dusts and small particles to adhere. It has been postulated that this process is rendered more effective through adsorption because of a surface electrical charge on the nasal mucosa.[4] The cilia then sweep the particulate matter to the pharynx. The nose can prevent entrance into the lungs of particles as small as three microns in diameter, but smaller particles elude the nasal barrier. Most bacteria causing respiratory infections are one to three microns in diameter, but since they usually are inhaled in clumps, they are efficiently removed as a rule. Viruses, which are of the order of 1/1000 of this size, are less efficiently dealt with, unless they occur in very large aggregates.[5]

The nose will react in a more or less similar manner, whatever the nature of the offending agent, whether it be an irritant chemical, virus, pollen, or distasteful emotional situation. In acute coryza, the most characteristic sign is a profuse watery discharge. The volume of secretion may rise from practically nothing to nearly 60cc in twenty-four hours.[6] The mucous membrane is reddened and engorged, while the turbinates are markedly swollen. After the first day or two, the secretion becomes thicker, yellowish, and more difficult to expel. The surface cells are largely destroyed, contributing to the copious discharge, which now also contains numerous inflammatory cells which have migrated to the area. Gradually, over a period of a few days, or a week, the flood abates, the swelling and redness subside, and the nasal epithelium resumes a healthy appearance.

Repeated attacks of rhinitis, particularly if there is an underlying element of obstruction, may result in chronic rhinitis. The mucous membrane is constantly swollen and reddened. Sticky, mucopurulent secretions are a continuous feature, and the glandular elements are hypertrophied. Commonly, the mucosal surface takes on an irregular, rounded "mulberry" appearance, and nasal passages are occluded by the swollen turbinates and redundant mucosa.

While all of us are susceptible to colds, the victim of hay fever, or allergic rhinitis, displays a marked nasal reaction to materials in the air which leave his associates unaffected. In such a patient, the nasal mucosa has become an allergic "shock" organ. Contact with the nasal allergen causes local release of histamine, with vasodilatation, increased vascular permeability, and severe nasal congestion, similar to the "wheal" and "flare" reactions in the skin, when the epidermis is the allergic shock organ. While we eagerly await the coming of spring, the hay fever sufferer dreads the blooming season, whose invisible pollens are poisons to his sensitive nose. His neighbor's cat or dog may provoke paroxysms of uncontrollable sneezing. In some cases a specific allergen is not identified, but the triad of rhinorrhea, nasal obstruction, and sneezing is present.[7] The nose in these cases shows a pale, boggy, edematous mucosa, with a thin mucoid secretion. The mucous membrane shows extreme retractility to 1% cocaine or ephedrine. If the patient has medicated himself prior to examination, the nasal passages may appear abnormally patent, or show exaggerated congestion due to rebound reaction. The secretion may show a large number of eosinophils particularly after an attack of sneezing or rhinorrhea. Touching the mucosal surface, especially of the inferior turbinate, leaves an indentation, showing that the swelling is due to stasis and edema, rather than actual hyperplasia of the mucous membrane as in chronic hypertrophic rhinitis. Though the pale swollen mucosa is the hallmark of allergic rhinitis, as usually seen by the physician, exposure of allergic subjects to their known allergens results in a brief hyperemic phase, followed by pallor and edema.[8]

In the later stages of allergic rhinitis, the chronic edema of the mucous membrane results in the formation of polyps, clusters of grape-like masses hanging from the roof of the nose, with a pale glistening surface, contributing significantly to the sense of nasal obstruction and oppression.

A large group of patients show symptoms of nasal congestion when confronted by adverse life situations.[9] In these unfortunate persons, anxiety, frustration, and resentment are often accompanied by a runny nose and nasal obstruction. Lacrimation adds to the nasal stuffiness. This autonomic response, mediated by the parasympathetic nervous system, may be part of a general parasympathetic reaction, or may possibly represent in part, a symbolic effort to wash out and crowd out the offending situation. Nasal congestion may also occur in some patients at times of sexual stimulation, and in women during menstruation and pregnancy, even to the point of epistaxis.[10] The relationship is obscure; castration results in atrophy of the nasal glands, and their action is inhibited by the hormones of the hypophysis and the thyroid.[11] The nose may be the shock organ in drug therapy. The nose may also bear the brunt of industrial stress, in those who work in a hot dry atmosphere, or those exposed to acid fumes, or irritating dusts. As the air in our cities is increasingly polluted by exhaust fumes, and industrial irritants, whole urban populations may suffer from chronic nasal and respiratory symptoms.

Of course, nasal reactions are not just infectious, or allergic, or emotional. Particularly in the chronic sufferers, there is an interdependence of all three. Death of a relative, or other psychic shock can pre-

(concluded on following page)

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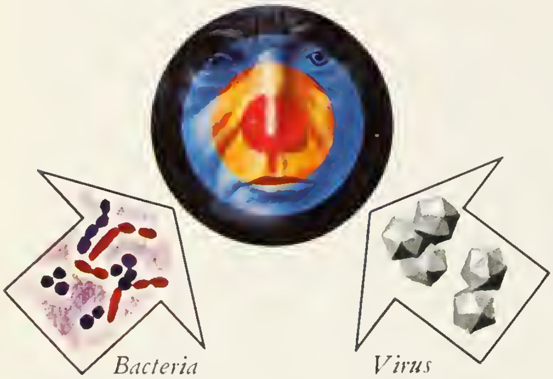
cipitate an attack of rhinorrhea in hay fever sufferers.[12] Others develop attacks of vasomotor rhinitis following change in temperature, chilling, or exposure to the sun, or simply warm bedclothes.



the complex interplay of allergy and infection is largely unclear. Allergy to the viruses and bacteria which cause infection has been postulated, but is difficult to demonstrate. The swollen obstructed allergic nose is more susceptible to infection. At the same time, infection often precedes or precipitates an allergic attack. Exposure of a susceptible patient to an allergen can activate latent virus organisms leading to infection.[13] This "jolt" reaction represents a summation of an allergen and a virus leading to symptoms in the nose as a shock organ, which neither could have produced alone. In childhood, repeated attacks of bronchitis and colds may be inflammatory reactions to an allergen, or precipitated by exposure to an allergen. These children may later develop typical allergic rhinitis. On the other hand, children with typical allergic histories, eczema, asthma, and allergic familial backgrounds, may later develop typical infectious rhinopathies. Skin tests in such patients are usually positive.

Nasal reactions are part of the systemic response of the patient to an unwelcome stimulus. In cases of respiratory infection and exposure to atmospheric irritants, the reactions are useful, and to some extent desirable. They are usually self-limited, disappearing within a few days, or upon removal of the provoking agent. Here the distressing symptoms can be ameliorated with appropriate decongestant agents, or, in the case of severe or complicated respiratory infections, antibiotics may be given, with reasonable confidence of a cure. On the other hand, when nasal reactions are the peculiar response of an individual to an allergen, or to an undesirable situation, they serve no useful purpose. The nose here is a shock organ in a stressful situation, but can furnish no response of value. It merely causes the patient symptoms which add to his problems. In these cases, symptomatic treatment is of great benefit, but often the underlying faulty pattern of response cannot be altered. Such a patient may literally be considered to be paying his way in life "through the nose."

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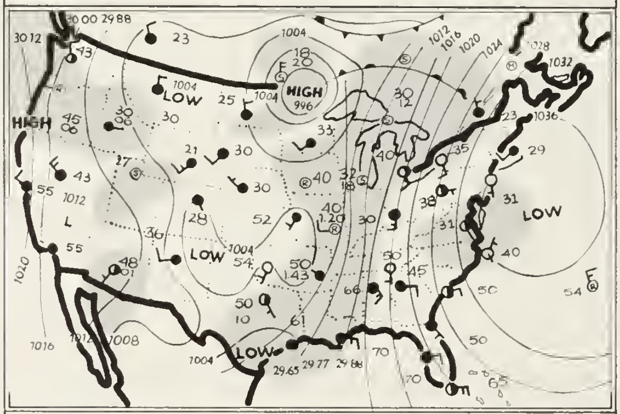

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HYPERCALCEMIA AND MALIGNANT DISEASE

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Unusual manifestations of neoplastic diseases are becoming increasingly more evident. Well established as being manifestations of tumors are Cushing's syndrome,[1] erythremia,[2] inappropriate anti-diuretic hormone secretion,[3] hypergonadotropinism,[4] and hypercalcemia,[5-9] among others. The prompt recognition of these endocrine symptoms may provide time for definitive therapy of the primary disorder.

A patient recently evaluated at the Medical College Hospital required a third hospital admission prior to establishment of a definitive diagnosis. A serum calcium determination on the eleventh hospital day revealed hypercalcemia, leading to the explanation for her entire symptom complex. The purpose of this paper is to report her case, and to review the literature concerning the association of hypercalcemia with malignant disease. The treatment of severe hypercalcemia will also be discussed.

Report of A Case

A 58-year-old white female was admitted to the referring hospital in early December, 1965. She had been in excellent health until a week prior to admission, at which time she developed the acute onset of a severe pain on the right side of the neck and in the right mastoid area. Cervical osteoarthritis was diagnosed. However, as she failed to improve on conservative medical management and required large doses of narcotics for relief of pain, she was referred to the neurosurgical service of the Medical College Hospital on January 7, 1966. A detailed neurological examination was normal except for some local tenderness in the right side of her neck. Lumbar puncture for study of cerebral spinal fluid, a complete blood count, and a urinalysis were entirely normal. Roentgenograms of her cervical spine revealed osteoarthritic changes, straightening of the normal lordotic curve, and narrowed lower cervical interspaces. In spite of treatment with cervical traction, physical therapy, and muscle relaxants, she complained of constant neck pain, was anoreetic, and sometimes agitated. As her subjective complaints greatly overshadowed her objective findings, she was referred to the psychiatric service for evaluation. Initially on the psychiatric service she was considered to have a passive-aggressive personality and conversion reaction. No further evaluation of this patient was done, as the family requested her discharge on January 29, 1966.

During the 13 day interval between the patient's first and last Medical College Hospital admission, the family noted that she complained of increasingly severe pain in the neck and became more lethargic and anoreetic. She was readmitted to the psychiatric division of the hospital on February 11, 1966. She was oriented but uncooperative, and for the first time a right facial nerve paralysis was observed. Roentgenograms of the skull, neurosurgical and otolaryngology consultations suggested a diagnosis of right petrositis and mastoiditis. Treatment with chloramphenicol and penicillin produced no improvement. She remained

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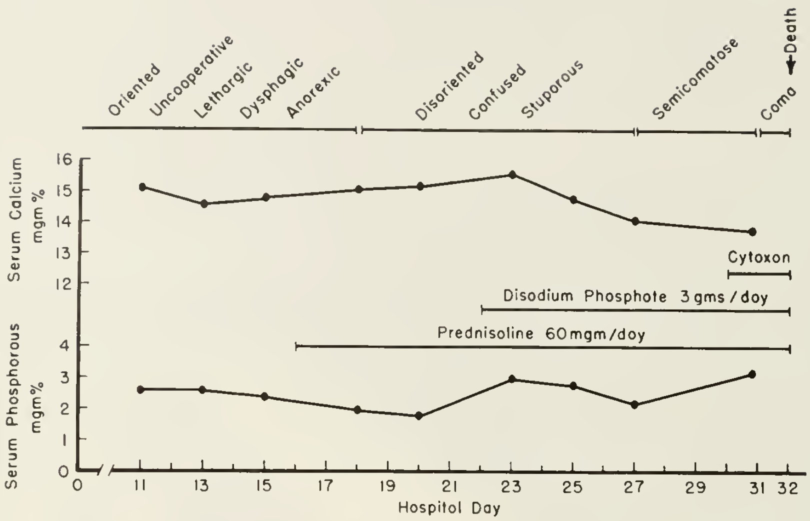

Figure 1. Clinical state, serum calcium and phosphorus, and treatment.

lethargic, at times disoriented, and because of a poor intake required parenteral fluids. The cerebrospinal fluid on the fifth hospital day was normal. The serum sodium level was 122 mEq/1, and the potassium 1.55 mEq/1, with normal blood urea nitrogen and blood sugar. She was then transferred to the medical service on February 18, 1966, with a diagnosis of possible water intoxication secondary to hypersecretion of anti-diuretic hormone.

Past history revealed a hysterectomy some 25 years ago for reasons not clear. She was taking no medications prior to her illness, and unsupervised self medication was considered improbable.

At the time of transfer to the medical service she was a hydrated, chronically and acutely ill white female who was lethargic. Response to painful stimuli was diminished. The blood pressure was 120/70 mm Hg, the pulse 80 per minute and regular, and the rectal temperature 100° Fahrenheit. Right facial nerve palsy was noted when the patient grimaced. Examination of the fundi was not remarkable. The patient consistently turned her head to the right and resisted passive movement of her head in any direction. There was cervical tenderness and bilateral mastoid tenderness with muscle spasm, but her neck was supple. There were no abnormal masses or lymphadenopathy, and the remainder of the examination was negative.

Serum electrolytes on the day of transfer to the medical service as well as on February 22, 1966, were within normal limits. The original report of abnormal serum electrolytes just prior to transfer to the medical service was considered to be laboratory error. On the eleventh hospital day, the serum calcium was 15.2 mg/100 ml and the phosphorus 2.6 mg/100 ml with normal alkaline phosphatase. The following day calcium and phosphorus excretion revealed 430 mg and 750 mg excretion respectively. Total and fractional protein determinations were normal on two occasions. Because of persistence of hypercalcemia the patient was started on large doses of prednisolone by nasogastric tube on February 23, 1966. After five days of prednisolone therapy, hypercalcemia persisted (Figure 1). Disodium phosphate by nasogastric tube was given. All measures failed to reduce the calcium level.

Several biopsy specimens of her bone marrow and nasal pharynx were normal. Skull roentgenograms showed a generalized haze in the right mastoid area and possible erosion of the superior and inferior sphenoid wings on the right. A chest roentgenogram was not remarkable. A bone survey performed on February 28, 1966, revealed multiple areas of lytic bone destruction in the right scapula, the right pubic bone, the right sixth rib anteriorly, and the proximal aspect of the right femur. There was an area of bone destruction in the sacrum associated with an ill defined presacral mass extending down to slightly above the anal verge. Intravenous pyelograms outlined normal kidneys but showed an indefinite area of obstruction to the right ureter at the level of the sacro-iliac joint superiorly. Percutaneous aspiration needle biopsy of the presacral mass produced malignant cells strongly suggestive of reticulum cell sarcoma. Treatment was started with cyclophosphamide (Cytoxan). After 1.3 grams of cyclophosphamide the patient was noted to be in deepening coma, and febrile for the first time, with pulmonary rales. She expired on the 33rd hospital day.

The following studies were done and were normal or negative: platelet counts, bromosulphothalein retention studies, prothrombin time, bilirubin, spinal fluid studies, urine and serum osmolarity, serum glutamic oxaldoacetic transaminase, lactic dehydrogenase, alkaline phosphatase, multiple blood cultures, and serum protein bound iodine. An electrocardiogram was normal except for occasional premature atrial beats and premature ventricular beats, and slightly prominent U-waves which were suggestive but not diagnostic of hypokalemia. An electrocephalogram was characterized by low voltage, irregular very slow waves appearing asynchronously in all areas.

Necropsy revealed reticulum cell sarcoma with widespread metastasis involving the lungs, brain, and kidney. In the presacral area there was a 10 x 7 cm firm lobulated mass which was considered to be the primary area. The cranium was quite extensively involved, with neoplastic destruction of the occipital bone, clivus, and right petrous ridge. No definite parathyroid glands were identified with the thyroid tissue or surrounding area. There was extensive, confluent pneumonia which probably contributed to the terminal event.

Discussion

In the case presented, the initial symptom of pain in the neck was due to osteoarthritis and neoplastic bone destruction in various parts of the cranium. The lethargy, anorexia, and dysphagia, progressing to disorientation and stupor were symptoms of persistent hypercalcemia. Detection of the hypercalcemia led to studies which revealed widespread reticulum cell sarcoma to be her primary disorder.

Hypercalcemia is a presenting symptom in a limited number of disease entities.[5] The differential diagnosis in a particular individual may be difficult. Various malignant tumors,[5-8] sarcoidosis, hyperparathyroidism, adrenal insufficiency, hyperthyroidism, vitamin D intoxication, the milk-alkali syndrome, acute bone atrophy due to fracture, Paget's disease of bone, immobilization in paraplegia, and idiopathic hypercalcemia of infancy, each has its individual characteristics as an aid in differential diagnosis. It is not the purpose of this paper to discuss the entire subject of hypercalcemia, but to limit it to hypercalcemia associated with malignant disease. An excellent summary of the more common laboratory findings in diseases associated with hypercalcemia has recently been published by Goldsmith.[9]

A number of tumors have been reported associated with hypercalcemia. Those most frequently associated are those of breast, lung, and kidney, in addition to multiple myeloma and lymphomas with and without demonstrable osseous metastasis. It is noteworthy that these patients may succumb rapidly from progressively severe hypercalcemia.

The explanation for the elevated serum calcium level associated with malignant neoplasms in the absence of osseous metastasis is not definitely known. O'Grady and associates[6] demonstrated immunologically a parathyroid hormone-like substance liberated from a renal cell tumor. Removal of this tumor caused reversal of the hypercalcemia. Indeed, postoperative hypocalcemia resulted, suggesting a preoperative period of parathyroid hypofunction. Chronic renal disease is known to cause parathyroid hyperplasia. However in the presence of normal or low serum phosphorous and normal blood urea nitrogen, parathyroid hyperplasia secondary to renal disease is unlikely as a cause of hypercalcemia in these patients. There is no good evidence that a vitamin D-like substance is elaborated as a possible mechanism in these cases.

The hypercalcemia associated with osseous metastasis is more readily explained by the osteolytic processes involved. However, the hypercalcemia sometimes associated with bone tumors does not appear to be due to simple mobilization of calcium by erosive tumors, since the calcium levels are usually normal despite widespread malignant bony destruction.[10] No adequate explanation is available for this inconsistent behavior. Hypercalcemia in the presence of osteolytic bone destruction in association with parathyroid hyperplasia is reported to be unusual.[7] In addition, the frequent absence of an increase in serum alkaline phosphatase activity in these malignant states would be contrary to a state of primary or secondary "osteitis fibrosa cystica." The possibility of the elaboration of a parathyroid hormone-like substance as a contributing factor in these cases is implied.

The symptoms of hypercalcemia may be minimal, but progress rapidly when associated with malignant states.[8] The shortened Q-oTc interval on the routine electrocardiogram may alert the physician to the possibility of hypercalcemia.[11] Varying degrees of polydipsia, polyuria, weakness and lethargy are classical symptoms in elderly individuals which may go unnoticed. The additional symptoms of anorexia, constipation, and apathy may lead to an erroneous diagnosis of depressive reaction. Disorientation, stupor and coma may become manifest in a few days. Indeed, hypercalcemia should be considered in all individuals with bizarre mental aberrations of unknown etiology.

Methods for the emergency treatment of hypercalcemia include the use of adrenocortical steroids,[12] chelating agents,[13] and inorganic phosphate.[8] Hemodialysis has been utilized for temporarily lowering serum calcium concentration, providing time for diagnosis and therapy.[14] Removal of the related tumor as well as treatment with antimetabolites have resulted in reduction of the serum calcium to normal levels.[5] The efficacy of thyrocalcitonin, the potent hypocalcemic, hypophosphatemic principle of the thyroid gland, must be clarified by further investigation.[15]

Chelating agents such as disodium ethylenediaminetetra-acetate (EDTA) have been used for a number of years in the management of hypercalcemia. The rationale for their use is to increase urinary calcium excretion at a rate beyond that of bone release of calcium. Unfortunately results with this method have not been satisfactory, due to EDTA-induced renal damage. Also, the calcium lowering effect is momentary because of prompt replenishment from the large calcium deposits in the skeletal system.

Adrenocortical steroids, through an unknown mechanism, have been effective in lowering serum calcium levels associated with malignant states. It is worthy to note that adrenocortical steroids may take several days to two weeks to manifest a response, and even then may fail to decrease the hypercalcemia. Goldsmith concluded that insufficient rapid response to prevent clinical deteriation may result from steroids alone. In addition, massive dosages of steroids necessary to effect a response carry well known complications. However, in summary it appears that in a hypercalcemic crisis, the use of adrenocortical steroids in large dosages is indicated.

The most encouraging advance in the treatment of hypercalcemia is with the use of inorganic phosphates. Dent and his associates[16] effectively used inorganic phosphate in the treatment of hypercalcemia associated with hyperparathyroidism. The intravenous infusion of sodium phosphate in one of their patients produced tetany, clearly demonstrating the effectiveness of phosphate in reducing ionized calcium. Recently, Goldsmith reported the use of disodium or dipotassium phosphate in the treatment of hypercalcemia occurring with various malignant states.[8] Their study indicates that small dosages of the phosphate, 0.5 grams to 3.5 grams per day orally or intravenously, are capable of lowering serum calcium within one to five days. With continued treatment, normocalcemia may be sustained. Hypocalcemia may occur, but can be readily corrected.[17] The most severely ill patients in their report, who failed to respond to inorganic phosphate, died within a few days of treatment. The concern that this form of treatment may favor extraskeletal calcifications needs further evaluation. Certainly, at this time it appears that the urgent need for the treatment of severe hypercalcemia justifies its trial with or without concomitant adrenocortical therapy.

The care of the hypercalcemic patient is not complete unless associated problems are considered. Renal insufficiency or renal failure with acidosis may occur. The synergism existing between digitalis and calcium must be kept in mind. The opposing actions of calcium and potassium on the myocardium may be enhanced by hypotassemia from any cause. Digitalis administration in these patients must be clearly indicated and closely followed. Meticulous nursing care and electrolyte management is of utmost importance.

Summary

A case report of reticulum cell sarcoma complicated by severe hypercalcemia is presented. The significance of hypercalcemia associated with malignant disease is discussed. The need for aggressive management of acute hypercalcemic crisis is elicited.

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NEURILEMMOMA WITHIN THE BROAD LIGAMENT

A CASE REPORT

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Peripheral nervous system tumors occurring in the pelvis or reproductive system have rarely been reported or discovered. A comprehensive review of the subject was presented in the literature in December, 1959 in a very informative paper by Gruhn, Hughes, and Aldisert.[1]

Neurilemmoma was first described in 1908, and since that time, large numbers of these tumors have been encountered in various anatomical compartments, but the cases involving reproductive organs, pelvis, and retroperitoneum have been most uncommon. There are but 13 previously documented cases found in these areas, the last being described in 1958 by Gruhn *et al,*[1] and this was the only other instance of a neurilemmoma within the broad ligament. A similar case has been found and is reported herein.

Case Report

Mrs. J. M., a 30-year old Caucasian gravida-3, para-3 was originally seen on Aug. 17, 1965 relative to recurrent episodes of vulvovaginitis since November 1964. Her past medical history included an unusual complication following the delivery of her third child 5 years previously. The pregnancy and labor were unremarkable, but apparently the actual delivery was extremely difficult. Immediately postpartum the patient experienced severe pain in the groin which persisted for several days, and she was temporarily unable to void.

Within a week of being discharged, she was readmitted to the hospital with severe pain in the right leg, and for approximately ten days she was unable to walk or stand without pain. Her symptoms gradually subsided, and she was largely free of pain within two and a half weeks. Her only previous complaint of pain in the right leg had occurred late in the pregnancy when she had difficulty using the right foot to brake her automobile.

Pelvic examination on Aug. 17, 1965 revealed a firm, 4 x 5 cm. mass which was fixed laterally against the right pelvic wall and which was exquisitely painful to palpation. Pressure on the tumor caused pain along the medial surface of the right thigh, radiating down into the medial portion of the right foot. Abdominal x-ray films were obtained, but no mass was radiographically discernible.

Pelvic laparotomy was subsequently performed on Aug 23, 1965 under general anesthesia, and a large, densely adherent, cystic mass was found between the leaves of the right broad ligament, well-removed from both the right ovary and the lumbo-sacral plexus. (Figure 1) The pathology report showed "neurilemmoma with marked cystic degeneration of the broad ligament." The accompanying photomicrographs show areas of hyalinization and the so-called Berocay bodies, as well as dense fibrous connective tissue and bundles of neural elements.

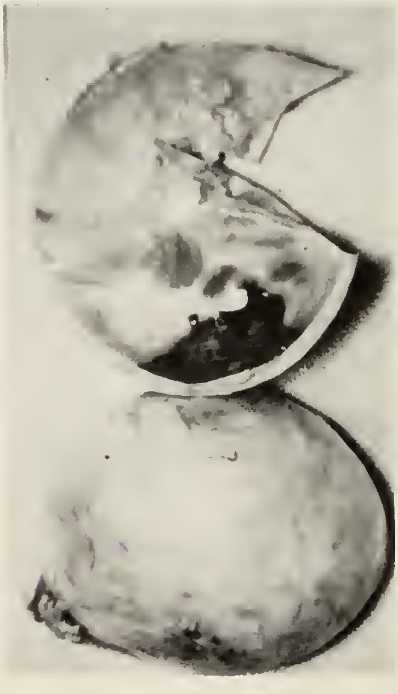

Figure 1

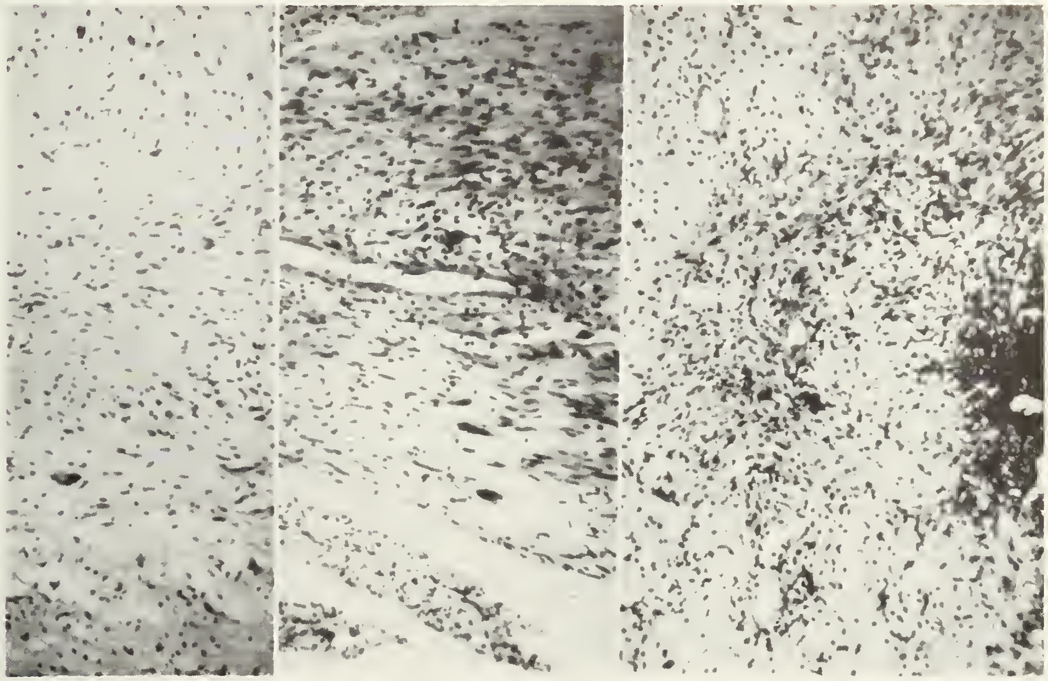

Figure 2

Specimen showing palisading of cells, cystic areas, and occasional large cells, characteristic of neurilemmoma.

The patient's early post-operative course was benign. Pain had disappeared from the right leg, but she complained of numbness in the right foot, along with tenderness in the right heel, and stated that walking seemed to relieve both these sensations. Later, pain reappeared in the foot and gradually began to radiate upward into the right leg and hip.

An outpatient neurologic consultation was obtained on Sept. 29, 1965 and it was the examiner's impression that the symptoms could not well be explained solely on the basis of the broad ligament tumor; the possibility of a related tumor in the cauda equina was considered.

On Oct. 6, 1965 a neurosurgical consultation was requested because of persistence of pain in the right foot, and again the examiner felt he could not reconcile the pelvic lesion with the peripheral symptoms. Cerebrospinal fluid analysis was normal; the colloidal gold curve was normal; VDRL was negative; blood and urine studies were normal also. X-ray films of lumbosacral spine were normal in all respects, and there was no inequality of leg length. Skin temperature was ten degrees higher on the right leg than on the left, and the sweating test was definitely abnormal. Ankle jerks were absent on the right, and the right calf was one-half inch smaller in circumference than the left.

Cranial nerve examination was unremarkable. The contour of the spinal column was normal and the jugular compression test was within normal limits. The straight leg raising test caused pain in the right leg after the limb had moved through an arc of 65 degrees, and the sciatic nerve stretching test was positive at that point.. Both these tests were normal on the left.

Double flexion of the lower extremities and rotation of the hips caused no pain. Decreased appreciation of pain and touch were noted over the lateral portion of the right foot, and gentle stroking of this area caused dysesthesia.

A myelogram was performed on Oct. 8, 1965 and no abnormality seen. Paravertebral sympathetic block was attempted, but resulted in such severe pain in the right leg that it was impossible to interpret the effect of the block. Physical therapy was initiated on Oct. 15, 1965 and gradually the patient showed an appreciable degree of improvement which has continued until the present time. The final neurosurgical diagnosis was: (1) reflex sympathetic dystrophy of right lower extremity, and (2) undiagnosed neurological lesion manifested by absent ankle jerk and atrophy of the right calf, not related to the primary diagnosis.

Discussion

Most neurilemmomata are not associated

with pain or paresthesia. However, tumors occurring in the pelvis or retroperitoneum are generally reported to have caused pain along the nerve trunk involved. Authorities state that there is no relation to trauma, and the tumors occur with about equal frequency in both sexes. Classically these growths are small but the retroperitoneal tumors tend to be larger. Frequently neurilemmomata undergo some degree of cystic degeneration, as is borne out by the microscopic analysis in this case.

Pathologists feel that this is a benign lesion, and it rarely recurs even if capsular elements are not completely removed. The bizarre symptoms in this patient emphasize the improbability that a specific or correct diagnosis of this unusual pelvic tumor could have been made from clinical findings alone.

Summary

1. A report of a case of neurilemmoma within the right broad ligament is presented.
2. Neurological and neurosurgical evaluations are presented, and the conclusions of all examiners are that the peripheral symptoms in this case are not explainable solely on the basis of pelvic lesion itself.

REFERENCE

1. Cruhn, J. C., Hughes, J. C., and Aldisert, C. O.: Tumors of the Peripheral Nervous System of Gynecologic Interest: Report of a Case of a Neurilemmoma Within the Right Broad Ligament Mimicking an Ovarian Cyst. Am J Obst and Gynec 78: 1334, 1959.

MEDICAL ETV

Thursday and Friday, February 2, 3

8:00-9:00 P. M.

DIGITALIS AND DIURETICS

Speakers

Dr. C. Thorpe Ray, Prof. of Medicine
University of Missouri School of Medicine

Dr. Thomas Killip, Assoc. Prof. of Medicine
and Chief, Division of Cardiology,
Cornell University Medical College

Dr. Lamar Crevasse, Assoc. Prof. of Medicine
and Chief, Division of Cardiology,
Univ. of Florida

Moderator
Dr. Dale Groom,
Medical College of South Carolina

SUMMARY: This program is a one-hour condensate of an all-day postgraduate course devoted entirely to an in-depth discussion of two major measures of therapy, digitalis and the diuretics. Emphasis is placed on recent advances in the field, particularly the interrelationships with electrolytes and the newer diuretic agents, by a faculty of acknowledged authorities. Purpose of the discussion is to provide an up-to-date rational basis for use of these drugs in clinical practice.

Thursday, February 16 — 8:00-9:00 P. M.
From the University of Western Ontario
Faculty of Medicine

THE POST-MENOPAUSAL PATIENT

with Dr. Peter A. Rechnitzer, Clinical Lecturer in Medicine, Dr. R. A. Kinch, Prof. and Head Dept. of OB-GYN, Dr. E. R. Plunkett, Assoc. Prof. Dept. of OB-GYN and Dr. M. L. Robinson, Instructor Dept. OB-GYN.

and

SUBARACHNOID HEMORRHAGE

with Dr. Peter A. Rechnitzer, Clinical Lecturer in Medicine, Dr. John Allcock, Clinical Lecturer in Diagnostic Radiology and Dr. Charles Drake, Clinical Assoc. Prof., Dept. of Surgery.

All Thursday programs are broadcast over Channel 7 in Charleston, Channel 35 in Columbia and over Channel 29 in Greenville, as well as over the closed-circuit network. Friday programs are carried only on the closed circuit network into the schools and hospitals.

GRADUATE MEDICAL EDUCATION IN SOUTH CAROLINA

A Review of The Millis Report and Its Pertinence to South Carolina

ROBERT F. HAGERTY, M. D.
Charleston, S. C.

For the second time within this century a detailed study of American medical education has been carried out. The first such external evaluation was initiated in 1908 by the trustees of the Carnegie Foundation and completed in 1910, becoming widely known as the Flexner Report.[1] Abraham Flexner urged wholesale reduction of commercial medical schools and drastic upgrading of standards. Within months of the publication of his report nearly one-half of the schools had to be shut down and improvements were made in the remaining ones. The death of Abraham Flexner on September 21, 1959, made it impossible to carry out the formal ceremony planned for the fiftieth anniversary of his report. The following memorial resolution in his honor was approved by the American Medical Association Board of Trustees in 1959.

"At the request of organized medicine in 1908 and with its cooperation, the Carnegie Foundation for the Advancement of Teaching conducted an independent investigation of the nation's medical schools. Abraham Flexner, a biologist rather than a physician, accepted the assignment. His tireless and courageous efforts involved a visit to each of the 150 so-called medical schools then in operation. His findings were published in 1910, a half-century ago this year.

His report threw the spotlight of public opinion on the grave deficiencies in the majority of the schools. The worst ones closed as a result. Improvements were made in the remaining ones. The investigation and Flexner report accomplished in a few years what otherwise might have taken a quarter of a century for the improvement of medical education and hence of medical care of the public. It marked one of the most significant contributions and greatest advances ever made in medical education in the United States.

The advocacy by Abraham Flexner of lasting ideals of free scholarship in a university environment as best for medical education, and his insistence on the practice of the scientific method by students provided valuable guidance that was an appropriate counterpart to his incisive criticisms. His membership on the General Education Board of the Rockefeller Foundation from 1917 to 1929 did much to secure millions of dollars from philanthropists for medical education to implement these ideals.

Therefore, be it resolved that the American Medical Association Board of Trustees pays tribute to the late Dr. Abraham Flexner, who has left an indelible imprint of positive significance on medicine as a result of his educational ideals, leadership, critical inquiry, courageous action, philanthropic persuasion, and tireless efforts. The whole community of medicine feels a deep sense of loss in the death of Abraham Flexner."[2]

The second external consultation was requested by the American Medical Association about three years ago because of the obvious illnesses besetting graduate medical education.[3] A Citizens Commission on Graduate Medical Education was formed representing a diversity of excellent educational experience. For three years the ailing patient was examined and probed in great detail. Finally the diagnosis was clearly established and the treatment outlined.

In order to appreciate the extent of illness in medical education, one must understand its purpose.[*] "The general goal of medical education is the same now as it was a decade or century ago: To educate physicians who have the desire and the qualifications to offer excellent health care to their patients." "The rise in specialization has been accompanied by an alarming decline in the number of physicians who devote themselves to continuing and comprehensive care of the whole individual." "There are no satisfactory statistics on the number of physicians in general practice. Some physicians who started as general practitioners now limit their practice, wholly or partially, to a specialty, and some with specialty training engage in general practice. There is no doubt, however, that the number and the percentage in general practice are declining. In 1931, 84 percent of all physicians in private practice reported themselves to be general practitioners. In 1960, the corresponding percentage was 45; and 1965, 37. The percentage is sure to decline further, for of all general practitioners in private practice in 1965, 18 percent were over 65 years of age, a proportion of oldsters much higher than in any other area of practice, and in recent classes of medical school graduates, only some 15 percent have planned to enter general practice." "The general practitioner leaves behind him a vacuum that organized medicine has not decided how to fill." "One result of this vacuum has been that the patient becomes his own diagnostician, and decides which kind of specialist he should approach. Or he seeks the advice of a pharmacist or a friend, or follows his own ideas of what constitutes proper treatment. Other patients — in increasing numbers — take their problems to the hospital emergency room. It is always open; all are received; and good medical care and facilities are there available, at least for emergencies. This solution, however, offers little continuity, and the relationship is less than satisfactory either to the patient or the hospital staff."

"Medical literature is full of articles lamenting the failure to develop a substantial corps of well-trained primary physicians. Why, then, are there so few of them?

We find three major reasons:

1. General practice, once the mainstay of medicine, has gradually lost prestige as the specialties have risen in honor and accomplishments. In deciding upon his own career, the young physician may never see excellent examples of comprehensive, continuing care or highly qualified and prestigious primary physicians. He is certain, however to see a variety of specialists and to observe that they usually enjoy higher prestige, greater hospital privileges, and more favorable working conditions than do general practitioners.

2. Educational opportunities that would serve to interest students in family practice and provide interns and residents with appropriate training are few in number and often poorer in quality than the programs leading to the specialties.

3. The conditions of practice for a general practitioner or a physician interested in family practice are thought to be less attractive than the conditions and privileges enjoyed by a specialist.

All three of these difficulties can be overcome, but heroic work will be required. It is time for a revolution, not a few patchwork adaptations."

Are These Criticisms True of South Carolina?

In order to try to answer this, let us look at the record. In figure 1 is depicted the percentage of medical students, graduates of the Medical College of South Carolina in the years between 1930 and 1960, entering general practice. Those listed as general practitioners

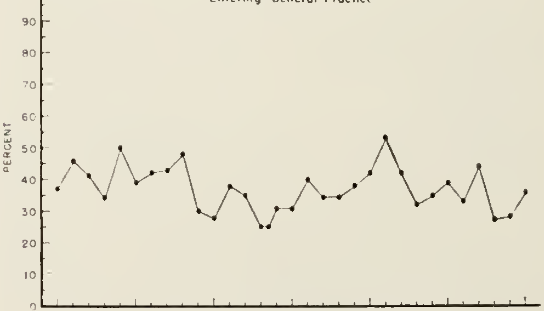

Figure 1

Unless otherwise identified, quotations are from The Millis Report.

include only those who were in general practice with or without a sub-speciality at the time of the investigation in 1966, or who had died within the period of study while in general practice. It is seen that the proportion of medical students from the Medical College of South Carolina of the graduating classes from 1930 to 1960 entering general practice has been maintained at an average of 35 to 40 percent over these years. From 1951 to 1960 about 24 members of each graduating class entered general practice.

Illustration number 2 depicts the pcrcentage of medical students from thc Medical College of South Carolina graduating classes of 1930 to 1960 entcring practicc out of state. Membership in this category was defined as practicing out of state or having died practicing out of state following graduation from the Medical College of South Carolina in the years 1930 to 1960. Again the avcrage seems to be a fairly stable one, running between 35 and 40 percent of each graduating class in that pcriod of time. From the graduating classes of 1951 to 1960 approximately 22 physicians left the state yearly to practice elsewhere.

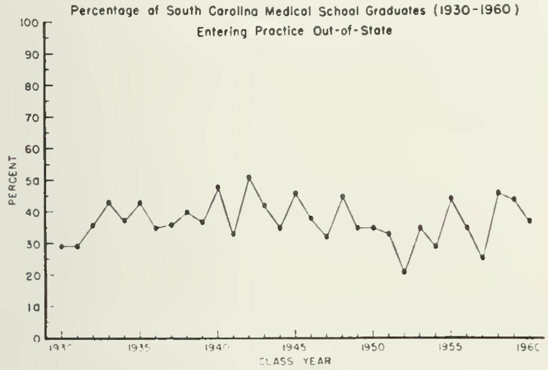

Figure 2

In illustration number 3 is represented the percentage of doctors graduated from medical schools out of the State cntering general practice in South Carolina between 1930 and 1966. The trend is unmistakably down. From 1951 to 1960 an average of 50 such doctors entered the State each year with an average of 17 entering general practice.

As a result of these changes the number and percentage of general practitioners in South Carolina has decreased precipitately from an average of 70 percent in 1930 to 36 percent in 1960 as seen in Fig. 4. These averages are even lower than those previously quoted on a national level.

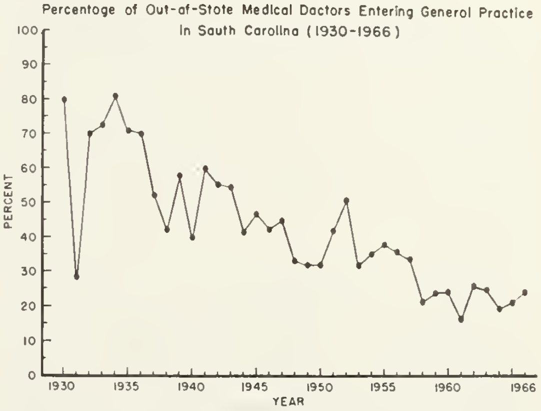

Figure 3

As a result of the inflow of medical doctors into this State, both general practitioners and specialists, the population per practicing physician has not greatly changed. However, the ratio of gcneral practitioners to the population has decreased alarmingly.[1] (Fig. 5)

It appears therefore that thc illness afflicting graduate mcdical education has extended to South Carolina.

The Diagnosis

"What is wanted is comprehensive and continuing health care, including not only the

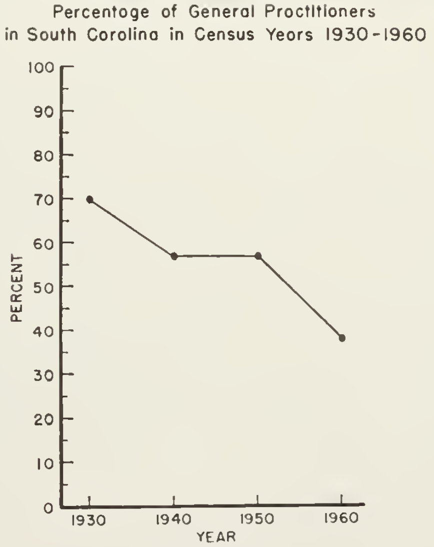

Figure 4

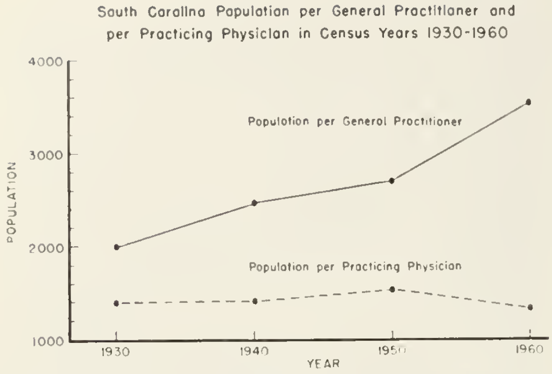

Figure 5

diagnosis and treatment of illness but also its prevention and the supportive and rehabilitative care that helps a person to maintain, or to return to, as high a level of physical and mental health and well being as he can attain. Few hospitals and few existing specialists consider comprehensive and continuing medical care to be their responsibility and within their range of competence; and not many of the present general practitioners are qualified to fill this role. A different kind of physician is called for."

The Treatment

Educational Goals

1. Medical schools and teaching hospitals should prepare many more physicians than now exist who will have the desire and the qualifications to render comprehensive, continuing health services, including preventive measures, early diagnosis and treatment of acute or episodic disease states.

2. No physician, by himself, has all the knowledge and skills necessary to provide all of his patients with optimal health care. Specialization implies division of responsibility. But the patient is undivided. Programs of graduate medical education should therefore give greater emphasis to the training of physicians for cooperative effort — among medical specialists and with members of other health professions — in order that each patient may be provided with the combination of skills and knowledge best adapted to his particular needs.

Organizational Goals

Graduate medical education must be considered not only in terms of curricula and teaching programs, but also in terms of its governing structure for designing and conducting those programs, for establishing standards, and for assessing the quality of graduates. Concerning the governing structure of graduate medical education, there are two goals to be stressed.

3. Stronger, more centralized, and better coordinated procedures and agencies than now exist are needed for systematic, continuing review and improvement of graduate medical education.

4. In the determination of educational policies and the establishment of programs and standards, the amount of attention given to the needs of medicine as an integrated scientific and professional whole should be greatly increased.

The Position of Comprehensive Medicine (General Practice) in the Medical Hierarchy

The first necessity is for organized medicine to recognize — not merely in a formal sense, but sincerely — that comprehensive health care is a high calling, different from specialization in thoracic surgery or hematology or something else, but not inferior — not inferior in training, in rewards, or in position within the house of medicine.

The lip service routinely paid to the importance of comprehensive, continuing health care does little to offset the powerful inducements to specialization. Family or personal physicians are said to be important. The House of Delegates has repeatedly emphasized the need for more of them. But in defining their functions and their relations with other physicians, the family or personal physician not infrequently is described in such condescending terms as these: 'He provides medical care within the limits of his competence,' 'He refers to other physicians those patients who have problems beyond his competence,' or 'His practice gives emphasis to the frequent and commonplace ailments.'

The attitude conveyed by such statements is more likely to repel than to attract able and ambitious students to careers in comprehensive family practice.

There is a kind of arrogance in specialized medicine that runs deeper than such attitudes do in other fields. The president of a company often defers to his comptroller on fiscal matters and to his legal counsel on legal matters. He utilizes their specialized knowledge without anyone talking about 'referring problems beyond his competence.' On the contrary, he is regarded as the epitome of over-all competence. Or, as another analogy, if the quarterback holds the ball for a place-kick specialist or calls upon the fullback to make a needed final yard, he is commended for utilizing effectively the talents of different members of the team. No one makes derogatory remarks about problems 'beyond his competence.' The practice of law, like the practice of medicine, now requires specialization. But in a modern law office it is a generalist rather than a narrow specialist who takes the leading role and earns at least equal prestige.

The analogies are relevant because the patient wants, and should have, someone of high competence and good judgment to take charge of the total situation, someone who can serve as coordinator of all the medical resources that can help to solve his problem. He wants a company president who will make proper use of the skills and knowledge of more specialized members of the firm. He wants a quarterback who will diagnose the constantly changing situation, coordinate the whole team, and call on each member for the particular contributions that he is best able to make to the team effort.

In contrast, the words used in medical discussions often seem to assign to the family practitioner the inferior status of a routing clerk rather than that of an important member of the team.

In these attitudes, medicine has adopted and perhaps exaggerated the values of the scientific specialist. In the academic world, it is customary to put a greater premium on depth of knowledge in a specialized area than on more comprehensive wisdom covering a larger field. Within their own guilds, the most highly respected mathematicians, physicists, or economists are those who have penetrated most deeply into specialized and restricted domains. Perhaps these attitudes are proper among scientists or in the university, where the men most honored are the ones who are extending the frontiers of knowledge. But medicine, although intimately based upon science, is not science. It is an application of science.

What happens to the patient is the measure of success in medical practice. He brings the physician a problem, often a complex one. The factors that contribute to it may be physiological, anatomical, psychological, social, economic, genetic, or describable in still other terms. Sometimes he needs many kinds of help. At other times the proper remedy is as specific as the contents of a single bottle from the pharmacy. In either case, the problem of diagnosing the situation, weighing the several factors, and determining the appropriate course of action is a complex one that calls for breadth of view. One ulcer patient may properly be sent to surgery, a second to a psychiatrist, and a third treated by medicine. All three patients should be able to feel confident that they get first attention from a physician who is aware that there may be several alternatives, not from a physician who knows only one.

Harvey Brooks, dean of engineering and applied physics at Harvard, has described the similar dilemmas of engineering and medicine as they have come to be more and more firmly based on science:

> '. . . in both medicine and engineering the importance of the underlying sciences has become so great that medical and engineering faculties are increasingly populated with basic scientists who do research or teaching in sciences which are relevant to but by no means identical with the practice of medicine or engineering. The old form of teaching primarily by practicing physicians or engineers was found wanting because practical knowledge was too rapidly being made obsolete by new scientific developments which could not be fully absorbed or appreciated by the mature practitioner. Yet in the process something of the spirit and

attitude of the skilled practitioner was lost, particularly his willingness to deal with problems whole rather than in terms of the individual contributing disciplines.'

The Flexner report gave medical education a timely and healthy push in the biological and biochemical direction. Growing scientific knowledge furthered the trend. And the availability of large funds for biomedical research accelerated it. Medicine has been greatly strengthened by these developments. They should be supported and continued. The problem is not that these aspects of medicine have grown too rapidly. The problem now is to add a new dimension to the practice of medicine that will help to utilize this growth and to bring the practice of medicine up to its high potential. The needed new dimension is continuing and comprehensive care of high quality. Medical education must produce competent and broadly trained physicians to give that care.

We have already made a start. The House of Delegates, the Academy of General Practice, the College of Physicians, and many individual leaders of medical thought — albeit with differences in the particular remedies and approaches they recommend — have all agreed upon the urgency of greater and more widespread provision of comprehensive medical services. Of course there are difficulties, but the change is necessary for the welfare of patients and for the future standing and respect, including self-respect, of the profession. It is time for decisive action to increase greatly the number of physicians who will devote their professional careers to the highly competent provision of comprehensive and continuing medical services. If organized medicine does not take the leadership in meeting this problem, others will.

Education for Comprehensive Medical Care

Medical schools and teaching hospitals are generally organized along disciplinary and specialty lines. There are departments of anatomy and physiology and other disciplines; there are pediatric and surgical and other services; but there are few services or clinics of comprehensive medicine. If students are to see comprehensive medicine practiced at its best, major changes in curricula and a major addition to teaching facilities must be made, starting in the medical school. It is in the medical school that the student first begins to make realistic comparisons between different kinds of medical careers, and it is there that he finds the first models upon which he patterns his own career aspirations. At present, medical schools provide excellent models of the scientist-research scholar and the hospital-based specialist, but rarely if ever do they provide models of comprehensive health care or of physicians who are successful and highly regarded for providing that kind of medical service. Worse, some faculty members tend to denigrate the role of such physicians.

There are exceptions, but in the typical medical hospital, the student does not see a normal range of patients, but a highly selected and specialized sample. In practice, patients seek help for a wide range of ailments, from the merely inconvenient to the crippling and fatal. In the typical medical school hospital, most cases are on referral because of acute conditions that require specialized or round-the-clock attention. In practice, contact may continue over many years, allowing a full, rewarding experience of successful management of health problems over a considerable period of time. In the hospital, contact is likely to be restricted to a few days.

The university hospital type of medical service is essential, and every student should be acquainted with it. But if this is the only type he sees, if only the hospital-based, acute, disease-oriented kind of practice is held before him as a model, it is little wonder that the interest in comprehensive medicine many students bring to medical school gets blunted and forgotten by the time they are ready to seek internships and residencies.

True enough, preceptorship programs give a few students realistic opportunities to observe family practice, and practically all medical schools devote the major part of a year (usually the senior year) to teaching in the out-patient clinics on ambulatory patients, but this teaching program is given less emphasis than are others. The low status accorded the outpatient clinic naturally leads the student to the belief that ambulatory medicine is relatively unimportant.

To inspire young physicians to enter the practice of comprehensive medicine and to educate them appropriately will require major changes in faculty, facilities, and attitudes. Merely adding a service of comprehensive medicine will not be enough, for everyone else would then relax and there would be little if any improvement over the present outpatient clinics.

A much more sweeping change is necessary. Continuing comprehensive care should be a central focus of medical school organization, planning, and clinical teaching. Right at the beginning of the student's introduction to clinical medicine he should begin to realize, and his teachers should emphasize, that illness is usually not an isolated event in a localized part of the body, but is a change in a complex, integrated human being who lives and works in a particular social and family setting, who has a biological-psychological-social history. In this complex history are to be found the interacting factors that determine the nature of his illness, and in his future the effects of the illness are likely to continue to be manifest. Of course the student will not understand all of the subtleties involved — no one does — but this kind of emphasis at this early stage will start to demonstrate how essential in patient care are the concepts of continuity and comprehensiveness. Early emphasis on these concepts will help put into proper perspective the relation of specialized services and particular illnesses to the patient's continuing welfare.

The new service will have to have budget, staff, quarters, out-patient facilities, and hospital beds. At its head should be a physician whose central interest is in comprehensive medical care, and on the staff should be other clinical professors and physicians of like interests. Collectively they will assume much of the responsibility for planning, management, patient care, and education.

But responsibility should not rest exclusively with the new service. Its central educational importance requires corporate faculty or staff responsibility, endorsement, and support in developing the teaching program and in maintaining effective integration with other hospital services. Specialists from other services will be required as consultants and part-time participants in the comprehensive program. When necessary, members of the staff will admit patients to the hospital just as do physicians on other services. The hospital beds available to the comprehensive service should not, however, be isolated or distinct from the beds used by other services. The staff members of the comprehensive service will be fully qualified to handle the problems that require hospitalization for some of their patients. In other cases, the services of surgeons, pediatricians, psychiatrists, or other specialists will be required. In either situation, the primary physician and the residents involved should be able to follow the patient throughout the period of hospitalization, even though major responsibility is, for a time, transferred to some other specialist. Continuity before, during, and after hospitalization is part of the responsibility of the primary physician and an essential part of the education of the resident. The achievement of these conditions may require modifications in the customs of some teaching hospitals, and will certainly require the hospital staff as a corporate whole to accept a considerable measure of responsibility for the comprehensive service.

A diverse patient population will be necessary. Patients should not be restricted to those who come by referral, but must include those who come voluntarily, for the educational program will require a patient population that covers the whole age range and a wide range of socio-economic and educational levels. In the course of time, such patients will display the whole gamut of problems from the common and minor to the most unusual and complicated.

Such services would provide the very best setting in which to introduce the medical school student to the practice of medicine. A clerkship served in this setting would give him opportunities to see a variety of patients with a variety of problems, to follow patients over a considerable period of time, to see comprehensive medicine practiced at a high level of excellence, to observe the work of different specialists, and to see how their specialized talents can be brought together to contribute to the welfare of the patient.

At the graduate level, students who aspire to careers as primary physicians would find in these programs excellent opportunities for a portion of their residency training. Moreover, the hospitals that establish these programs will present an example of one staff working regularly, continuously, and cooperatively with the staffs of other services. This example should be a good opening wedge in bringing about a greater amount of consultation and a greater degree of corporate responsibility for educational planning. Graduate medical education generally would profit from such a change.

We know of no medical school or teaching hospital that now offers a comprehensive care service of as high quality as we recommend, or one that constitutes as central and important a part of the teaching program. Such services should be established as quickly as possible. It should be recognized from the outset that they are to provide model, exemplary medical services for educational purposes. In size, they should be no larger than is necessary to fulfill these demonstration and educational functions.

Graduate Programs for Primary Physicians

The primary content of graduate education for comprehensive care will include medicine, psychiatry, pediatrics, medical gynecology, and preventive medicine. A three year program is outlined and a specialty board recommended for certification and diplomate status for physicians highly qualified for comprehensive care.

The result of these educational changes should be a growing corps of physicians who qualitatively are the peers of their classmates who chose surgery or some other specialty. The difference will be in the form rather than the level of practice and responsibility. Having a greater breadth of medical interest, they will normally be the first professional contact for a new patient and the continuing point of contact for an old one. To a greater extent than their more narrowly specialized colleagues, they will be diagnosticians and medical coordinators, to whom the primary question will not be, 'What can I personally do to be of most help to this patient?' but, 'What can I do and what need I arrange to have done by others that will be of most help to this patient?'

It should be clearly recognized that a major, costly, national effort will be needed to educate primary physicians of the quality and the number needed to provide comprehensive and continuing care to a population reaching up toward 300 million by the time any substantial number can be prepared for practice. The changes in medical attitudes and the changes in schools of medicine and teaching hospitals will require radical breaks with past traditions. To make these breaks precipitously is too much to expect of many hospitals and schools of medicine, but others have already demonstrated their interest. We wish to encourage some medical schools and teaching hospitals to pioneer. Others will follow. Success can be achieved if the faculties and staffs unite in the thoughtful development and support of the necessary educational programs, and if they enlist the cooperation of the ablest practitioners of medicine in carrying them out.

The Practice of Comprehensive Health Care

If the number of physicians preparing themselves for comprehensive medicine is to increase markedly, obviously there must be opportunities for esteemed and rewarding practice. This problem, however, will not be a serious one if the changes considered in the preceding sections can be made, for the demand for such physicians is great.

The ideal place for a primary physician is in group practice. Practice within a group will encourage the use of specialized colleagues for help in diagnosis or treatment. Group practice will give the patient the advantages of continuing contact with a physician who knows him and his medical history, combined with the advantages of access to a wider array of skills and facilities whenever they are needed.

There is no reason to expect that all primary physicians will be identical in training or interest. Those who feel so inclined can provide comprehensive care to their own patients and offer more specialized services to others. Thus, one physician might be the group's expert on gastrointestinal problems and another be the expert on virology. Depending upon the size of the group and the interests of its members, there will be room for a reasonable range of variation among those rendering comprehensive care.

Group practice will also benefit the primary physician himself. He will have the intellectual stimulation of working daily with other physicians with knowledge and interests that complement his own. Like his colleagues, he will benefit from the quality control exercised by able peers. And he will have greater opportunity to take leave for vacations or for special or refresher courses, while his patients are cared for by other members of the group.

Primary physicians would be fully qualified to admit patients to hospital medical services and should have the same kind of admitting privileges as do present-day specialists. Moreover, through membership on hospital review committees (such as the tissue committee, the medical audit committee, or the hospital utilization committee), they should have a particularly valuable influence in helping to bring about better coordination among the hospital's medical and surgical services.

Men of this stamp are of such value in group practice that there should be no difficulty in convincing students that rewarding opportunities lie ahead for any who wish to prepare themselves for careers as primary physicians.

Combined Action

The three difficulties that have stood in the way of the more widespread practice of comprehensive medicine — low status, lack of an appropriate educational concept and accordingly of educational opportunities, and conditions of practice — have reinforced each other.

These have been real barriers to entrance upon a career of comprehensive medical service, but surely they can be overcome. To a large extent they have developed because of the specialization and fragmentation of practice brought about by greatly increased knowledge and the mastery of new skills and new techniques. Now, in order to bring medicine's enhanced diagnostic and therapeutic powers fully to the benefit of society, it is necessary to have many physicians who can put medicine together again.

Conclusions

For the second time in this century a consultant has been called in to study the afflictions of medical education. The present consultant, as was the first, is well qualified. His examination has been thorough, his diagnosis concise, and his treatment detailed. The time has come to operate to resect the ailing parts and reconstruct what is necessary for survival and growth. Further procrastination will but reduce the possibility of recovery.

For any learned profession there are but two alternatives for establishing standards of practice and education. Responsibility can be assumed by society as a whole, operating through government, or can be assumed by the organized profession through a voluntarily accepted self-discipline. There are no other alternatives, for, if the profession does not take responsibility, society will surely demand that the vacuum be filled and the government assume the responsibility. It is the conviction of the Commission that the profession of medicine should assume the responsibility for its standards of education and should have a mechanism adequate to the full discharge of these responsibilities.

REFERENCES

1. The Carnegie Foundation for the Advancement of Teaching and Medical Education in the United States and Canada. Bulletin Number 4, 1910.
2. Medicine's Debt to Abraham Flexner. L. M. Orr, M. D. JAMA 173:1429-1431, 1960.
3. The Graduate Education of Physicians: report of the Citizens Commission on graduate medical education. AMA 1966.

FINGERNAIL NECROSIS FROM NAIL HARDENER FORMULA

JOHN van de ERVE, M. D.
Medical College of South Carolina
Charleston, S. C.

During 1965 a nail hardening formula was marketed by a well known cosmetic manufacturing firm.* Gradually, numerous cases around the country have been reported as developing severe damage to the nails from this cosmetic preparation. A previous case reported by March[1] involved moderate nail damage and paronychiae, with negative patch tests to the nail polish and to formalin. This responded to therapy after a period of three months time. The ingredients of the nail strengthener are not available at present but it is possible that the hardener contains formalin in sufficient strength to "cook the nails" and strongly irritate the surrounding paronychial tissues.

Report of a Case

A Caucasian housewife, age 44, was seen June 21, 1966 after having had rather marked changes in the fingernails for one month. She had been using the nail hardening formula for three months previous to the office visit. On examination the nails of the fingers showed a sharply demarcated white necrosis, involving the subunguial area and the nails. This necrosis was limited to the distal half of the nails and there was a moderate inflammation of the soft tissues at the base of the nails. There was only moderate discomfort.

Scrapings of the nails, softened with potassium hydroxide and examined under the microscope, did not show fungi and did not show monilia. Cultures have not shown a growth of either fungus or monilia.

Treatment consisted of nystatin cream rubbed under the nails and into the nail beds twice daily.

On her last visit on August 2, 1966 there was definite regrowth of normal nail and much improvement. Since the outward growth of the nail is rather slow, a further period of several months may be necessary for complete elimination of the damaged nails.

Comment

Several years ago another nail polish undercoat was found to be a strong irritant and was withdrawn from the market. Apparently the hardening formula used here is a strong sensitizer or irritant.

New cosmetic formulas should probably be subjected to extended trials before being made commercially available.

REFERENCE

1. March, C. H.: Allergic contact dermatitis to a new formula to strengthen nails. Arch Derm 93:720, 1966.

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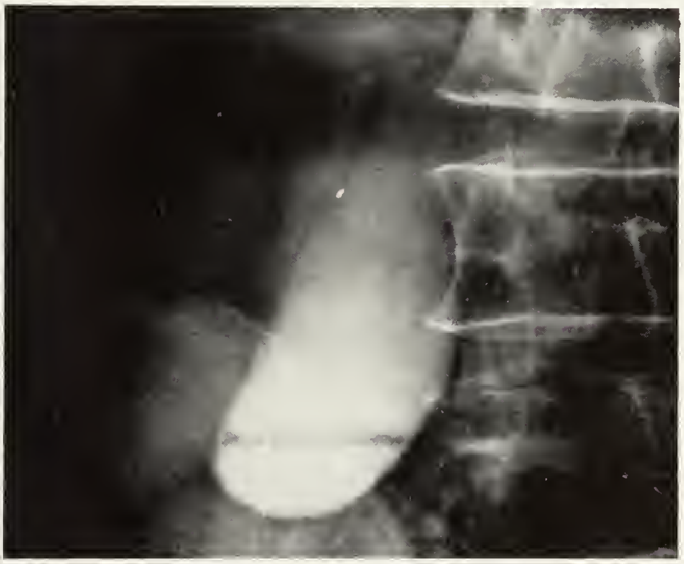
* Strong and Long was the name of the hardener used in this case. (Helena Rubinstein Co.)

X-RAY FILM OF THE MONTH

S. ELLIOTT PUCKETTE, JR., M. D.
Medical College Hospital
Charleston, S. C.



This gallbladder spot was taken on a moderately obese middle-aged white female who intermittently had had attacks of cramping abdominal pain in the right upper quadrant.

This is an upright film of the gallbladder in which the multiple small calculi have layered out. This layering phenomenon is due to the difference in the specific gravity of the bile which has been present in the gallbladder for some time and has become concentrated, as distinguished from the fresher lighter hepatic bile. Thus, the calculi will localize at the bile level of the same specific gravity. Quite often this is at the bottom of the gallbladder but at times may be at a higher level as shown here.

The point to be made here is that it is usually held that a gallbladder examination is not adequate unless an upright film has been taken in an effort to elicit this phenomenon, for at times calculi will be seen under these circumstances when they are not visible on the prone film.

President's Page

A new era has dawned for the Medical College of South Carolina. Its Alumni Association, in conjunction with its administrative staff, has organized and chartered The Health Sciences Foundation of the Medical College of South Carolina.

All other colleges and medical colleges that I'm familiar with already have such an institution and this foundation will be a boon to our medical college. It is an eleemosynary institution so its gifts are completely tax deductible. The Foundation will gladly accept gifts in any form — stocks, bonds, land, a product, money — any gift that a donor may care to give.

The giver may specify the exact use to which his gift, or, if he chooses, the income from his gift, may be put. For example, the pediatricians in the state, if they so desire, may establish a fund under the supervision and control of the foundation, to be used in the Department of Pediatrics and at the discretion of the Chairman of the Department. Or a surgeon may donate a sum of money to be used only toward the development of an artificial heart. On the other hand, one may make a donation to the general fund of the foundation to be used as the directors see fit.

The name Health Sciences in the title of the foundation is used all inclusive because the funds of the foundation may be used in any or all phases of medicine — nursing, dentistry, pharmacy, and the paramedical professions.

Every physician in the state will be solicited by someone from the Alumni Association. Everyone will have an opportunity to give and to specify, if he chooses, how his gift or the income from it will be used. The Alumni Association has the state organized into districts and if you haven't had an opportunity to donate already you will have soon.

The prime target of the Alumni Association is for endowment of a professional chair in each department. They hope that each physician will gladly contribute forty dollars each per year. This is not much from each of us and in time will greatly benefit the school that gave most of us a start.

The foundation's president is Dr. McCord, President of the Medical College. Its executive vice president is Mr. Wm. Huff who is the man in charge of development of our Medical College. There are twenty members of the Board with representatives from nursing, pharmacy, dentistry, etc. The organization of this foundation augurs well for our Medical School. We now have a foundation which will accept any type gift, large or small, and use it for improvement in any way the donor cares to specify. Now, it's up to us doctors to give and to keep the directors busy deciding how to spend our gifts for the greatest good of the school.

George Dean Johnson, M. D.

Editorials

Two Medical Schools?

When Thomas Cooper, president of the South Carolina College, recommended in 1821 the establishment of a medical school in the State, he proposed that its activities be divided between Charleston and Columbia. For various reasons, among them the probably major argument that the seacoast city had a potential faculty ready and eager to function, Charleston was selected as the proper location.

Over the many years since the Medical College was founded, there has been no concerted effort to remove it or to offer in-state competition to it other than at the shortlived and illfated medical school of the University in the 1870's.

Times have changed mightily since 1824, when the College opened, and the problem of the demand for doctors in the State has become a matter of pressing concern to the medical profession and the public. Proposals heard frequently and strongly in recent years indicate that many of our physicians and legislators are not content with things as they are in South Carolina medical education.

The move for a medical school in Columbia has been gathering strength to the point of the proposal of the introduction of a bill in this year's legislature to plan and establish a new school in the State's capital.

Will such a new school work favorably to meet our present and future problems in producing physicians? Will the graduates remain in the State? Two views of the problem as seen by the two chief protagonists are given as authentic information in this number of the Journal. They should be good food for the open mind.

Abstract of

MINUTES OF COUNCIL SOUTH CAROLINA MEDICAL ASSOCIATION

November 1, 1966

Council met for lunch and the fall meeting at the Wade Hampton Hotel, Columbia, South Carolina on November 1, 1966, at 1:00 p. m., with Dr. William Perry, Chairman of Council, presiding.

Present: Dr. George D. Johnson, President; Dr. Norman O. Eaddy, President-Elect; Dr. John C. Hawk, Jr., Vice-President; Dr. Ben N. Miller, Secretary; Dr. J. Howard Stokes, Treasurer; Dr. J. I. Waring, Editor of Journal; Mr. M. L. Meadors, Executive Secretary and Counsel; Councilors Dr. Clay W. Evatt; Dr. Wyman King; Dr. Martin M. Teague; Dr. John P. Booker; Dr. Roderick Macdonald; Dr. Wm. Perry, (Chairman); Dr. Michael Holmes; Dr. Joseph D. Thomas; Dr. Joseph P. Cain, Jr., Delegate to AMA; and, Dr. J. Hal Jameson, President, S. C. Medical Care Plan.

Dr. Buford Chappell appeared before Council as Chairman of the Committee on Scientific Program, requesting advice and suggestions from Council regarding a Symposium on Medicine and Religion in conjunction with the Annual Meeting. Dr. Eaddy, Dr. Evatt, Dr. Perry, and Mr. Meadors commented on a meeting of this nature they had attended recently which they described as excellent. Dr. Eaddy moved that Council request the Program Committee to undertake to incorporate into the plans for the meeting a speaker for a short period on Medicine and Religion. Motion was seconded and passed.

Dr. Chappell indicated that Mead Johnson Laboratories had offered to send a speaker, at their expense, to speak on "Current Concepts in Cancer Chemotherapy." He asked for Council's opinion on the length of time to allot someone traveling some distance for this purpose, and whether this should be included in the program. It was passed that this portion of the program be worked in with a half-day program of the South Carolina Chapter of the American College of Surgeons.

Dr. Chappell commented that his committee expects to have some excellent papers for the Scientific Session.

The time of the first Council Meeting on May 7, 1967, in conjunction with the annual meeting was discussed and Dr. Eaddy moved that the scheduled time for the meeting be left to Mr. Meadors and the Program Committee. Seconded and passed.

Dr. Jameson commented on a meeting he attended in Chicago and since it is possible that Blue Shield will be asked to handle the implementation of Title XIX, he asked Mr. Sandow to appear before Council to discuss and answer questions concerning Title XIX. He furnished members of Council with copies of Title XIX in Outline and Fact Sheets from various states.

Dr. Frank Owens appeared before Council as Chairman of Council's Liaison Committee on Title XIX. Various areas of the program were discussed. It was concluded that so many services are mandatory in Title XIX Program, optional factors should not be accepted but kept in mind for possible addition later. Dr. Owens was asked to keep Council informed on the activities of this committee.

Dr. Cain moved that Mr. Sandow be asked to furnish to all members of Council work sheet plans from the various states as the plans are offered. Motion seconded, and passed.

Dr. Waring reported a very pleasant increase in the income from the Journal in the way of advertisement. He asked for Council's reaction to an Assistant Editor, and suggestions as to what compensation might be offered. Dr. Macdonald moved that it be left to the Editor of The Journal to hire someone to train for this work, and to work out the financial arrangements. Motion was seconded, and passed.

Dr. Waring reported that efforts had been made by the state-wide Committee on Public Relations from the various medical societies, at the suggestion of Dr. Solomon, to have a meeting at a recreation headquarters with free golf, fishing, and so forth, with a guest speaker from AMA. From the responses received (10 to 15 affirmatives) it was questioned whether AMA should be asked to send someone to speak to such a small group. Dr. Eaddy moved that the proposed meeting to include recreational activities not be held this year. Motion seconded, and passed.

Reports from the various committees indicated that most all of the committees have held an organizational meeting, electing a permanent chairman.

Dr. Miller reported on the Advisory Committee to Vocational Rehabilitation, as Chairman of this sub-committee. He indicated that at the last meeting of Council and at the follow-up organizational meeting of the Committee on Cooperative Activities, he had indicated the possibility of bringing in the present Medical Advisory Committee to the Agency on Vocational Rehabilitation as a whole and making it a part of the SCMA Committee System. Council approved this arrangement, and the final action allowing this arrangement was taken by Dr. Dill Beckman, through the State Commission, at a recent meeting, preparations being made for such arrangements by vote of the Medical Advisory Committee itself at the spring meeting. Under the present committee arrangements, it is the prerogative of the President of the South Carolina Medical Association to name the committees on the advice of the Council, SCMA. Since the Medical Advisory Committee to Vocational Rehabilitation has worked so closely with the agency, particularly on a grass roots level, it seemed desirable that the Councillors in the field, and the State Agency be allowed to nominate the members of this sub-committee to replace those whose terms expire. This was a verbal understanding when this was discussed with Council; and, on this basis the committee was named. Dr. Hope, Dr. Johnson, Dr. Perry, and Mr. Meadors were furnished the list of members in October. Dr. Miller indicated that the committee will meet again during the fall, and committee action for the State Journal will be presented prior to the SCMA annual meeting.

There was some discussion regarding this sub-committee and Dr. Booker moved that Council approve the committee as set up by the Chairman of the Committee, as it has been done, with the policy as it stands. Motion was passed.

Dr. Jameson reported that the Committee on Industrial Medicine has met twice and is busy getting out a new Industrial Fee Schedule, which will be more inclusive and more adequate.

Dr. Thomas indicated that it is hoped that after this year there will be a concrete, uniform method for election of Councilors from all districts, and suggested that this year Councilors, whose terms expire, might follow the same procedure previously used in that particular district.

Dr. Johnson cited some outstanding services in public relations for the medical profession by Mr. Walter Brown, President of Television Station WSPA in Spartanburg, and felt that recognition by SCMA in the way of presentation of a plaque would be appropriate.

Dr. Waring commented on the outstanding work of other news media, specifically the News and Courier (Charleston newspaper), indicating that some recognition would also be appropriate.

Dr. Booker moved that this one Television Station and this one Newspaper receive appropriate recognition from SCMA this year. Motion seconded, and passed.

Dr. Cain moved that a committee be appointed to study future awards such as described and bring back recommendations to Council for consideration. The motion was seconded and passed.

Dr. Johnson stressed the importance of the medical profession making a conscientious effort to aid the Highway Department in highway safety and to promote legislation in this field.

It was duly moved, seconded, and passed that Mr. Meadors notify the County Medical Societies of the Council's endorsement of highway safety, particularly to promote legislation in this field.

Dr. Macdonald brought to Council's attention a written request from the York County Medical Society for clarification on a series of questions as follows:

I. Why are welfare patients telling M. D.s that their Case Worker told them "The Welfare Dept. will pay the first $50.00 of my Medicare Part B."

II. Investigate and begin process for payment of M. D.s for care of welfare patients. The other states do, N. C. druggists do, other people connected with them do – why not DOCTORS.

III. No pay difference in Medicare or other care programs because of community size – only on basis of service.

This was taken as information and turned over to Mr. Meadors for investigation and clarification.

Dr. Hawk discussed hospital procedures for certification. Dr. Jameson was asked to furnish a ruling from Blue Shield on certification forms for hospital charts, which might possibly be published in the *Journal*.

Dr. Stokes gave the treasurer's report, and each item in the budget was reviewed carefully. It was duly moved, seconded, and passed, that the budget as set up, be adopted in its entirety.

Mr. Meadors commented that the proposed Health Fair, for which Council had previously appropriated $5,000.00, would not be held in April, 1967, and the only funds required amounted to reimbursement of $200.00 which had been spent by the committee in the initial planning.

Dr. Miller moved that the Treasurer and Executive Secretary be authorized to borrow the necessary funds and to execute the necessary note that might be required to finance the balance of the budget for the current year. Motion was seconded, and passed.

Dr. Jameson invited Council to hold the next meeting in the Blue Cross - Blue Shield Building where there is a catering service available. His invitation was unanimously accepted.

Meeting adjourned.

Ben N. Miller, M. D.
Secretary

Cleft Lip and Cleft Palate Center

Robert F. Hagerty, M. D., Director
Willis K. Mylin, D. D. S., Associate Director

The Cleft Lip and Cleft Palate Center, located on the second floor of the Basic Science Building, 280 Calhoun Street, Charleston, is now supported by a grant from the National Foundation—March of Dimes. The Center is functioning in the same capacity as it has in the past. There is no charge to eligible patients.

The services at the Center are as follows: Examination of cleft lip and cleft palate patients which includes evaluation by a plastic surgeon, dental surgeon, orthodontist, ENT specialist and a speech pathologist. In addition, x-ray films are taken for study of facial growth and palatal movement. Dental impressions are taken from which dental study models are made and samples of speech are recorded on a tape.

Within the last two years, a pin-retained expandable prosthesis has been developed at this Center. In order to provide early mechanical closure of the palate and positioning of the maxillary segments with this technique, it is now desirable to see the patient with the cleft lip and cleft palate deformities as soon after birth as possible. The malleable condition of the maxillary segment in the neo-natal period permits the attainment of a more anatomical and functioning result than has hitherto been possible. This improvement is seen in more normal facial contours, better development of speech and improvement in dental occlusion. This improved regimen permits sucking action and more normal habits of feeding with marked reduction of parental anxiety.

For appointments, please call or write the Cleft Lip and Cleft Palate Center, Medical College of South Carolina, 280 Calhoun Street, Charleston, South Carolina 29401. The telephone number is 723-9411, Extension 553.

Thank you for supporting Christmas Seals!
1966
CHRISTMAS GREETINGS
Christmas Seals Fight Tuberculosis and Other Respiratory Diseases

News

Dr. E. Kenneth Aycock

Dr. G. S. T. Peeples

Dr. E. Kenneth Aycock, director of Charleston County's health department, was appointed in November to succeed Dr. G. S. T. Peeples as State Health Officer.

Gov. Robert E. McNair made the appointment upon the recommendation of the State Board of Health's Executive Committee.

Dr. Aycock will take over the state's top health post after a distinguished medical career in his native South Carolina and California.

For the Pinewood-born physician, the appointment will mark his second service with the State Board of Health. He went to Charleston in April 1965 after two years as assistant director of the board's division of maternal and child health.

He received his undergraduate degree from Duke University and was a honor graduate of the Medical College of S. C. in 1954. He served an internship at Columbia Hospital and his residency in pediatrics at the Los

(Continued on Next Page)

Dr. G. S. T. Peeples announced in November he will retire from his post as State Health Officer February 1 because of illness, but will continue as a consultant to his successor.

The Scotia-born physician has been state health officer since he succeeded the late Dr. Ben F. Wyman in 1954. Dr. Peeples was appointed after serving as assistant state health officer, director of six county health departments and three divisions in the State Board of Health.

Among his first tasks was the organization of the Salk polio vaccine program and the solving of health problems posed when Hurricane Hazel smashed coastal areas in 1959.

Programs initiated under Dr. Peeples administration include inspection and enforcement of laws relating to drugs and poisons; a business management office to effect greater economy in purchases and business activities; a statewide education program in home accident prevention; poison control centers; and

(Continued on Next Page)

Aycock

Angeles Children's Hospital and the Medical College of S. C.

Dr. Aycock was in private practice from 1957 until he became director of the Child Evaluation Clinic of the State Board of Health in 1961.

Dr. Aycock received his master's degree in public health from Harvard University where he also was recipient of a Harvard Key.

Peeples

evaluation clinics for mentally retarded preschool children. Dr. Peeples was also responsible for enlarging the shellfish sanitation program, and for expanding the S. C. Pollution Control Authority, of which he is ex-officio chairman, to include air as well as water pollution.

A continuation course in "Clinical Electroencephalography" will be conducted on June 5-7, 1967 in Philadelphia. This is the second course sponsored by the American EEG Society (aided by a grant from the Bureau of State Services, U.S.P.H.S.) and is designed for physicians who have had little or no formal EEG training. Inquiries about further details of the course and registration procedure should be addressed to Dr. Donald W. Klass, EEG Course Director, Mayo Clinic, Rochester, Minnesota.

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The Sixth National Symposium of the Heart Association of Southeastern Pennsylvania will be held Feb. 23-24 at Philadelphia's Sheraton Hotel.

The symposium, part of the HASP professional education program, will concern itself with the subject, "The Metabolic Basis of Human Atherosclerosis."

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The twenty-fourth annual session of the Atlanta Graduate Medical Assembly will be held Feb. 5, 6, 7, 8 at the Marriott Motor Hotel. The sessions are being sponsored by the Fulton County Medical Society.

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Seminar on Psychosomatic Aspects of Gastrointestinal Disease will be presented at the regional meeting of The Academy of Psychosomatic Medicine, Gainesville, Florida on March 17. This program is dedicated to the relation between depression and gastrointestinal disorders.

Fee: $20.00

For further information write to:

The Division of Postgraduate Education
University of Florida College of Medicine
Gainesville, Florida

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Palmedico Pharmaceuticals announces the establishment of a yearly grant of $1,000 to be awarded to a physician in training for general practice in South Carolina. This is being done to encourage young physicians to enter general practice in South Carolina and to enable them to increase the quality and length of their training for such a career.

This grant is given to an individual on the recommendation of the Education Committee of the S. C. Academy of General Practice.

The first such grant was given to Dr. Henley D. Hurt at the state meeting of the S. C. Academy of General Practice at Clemson November 9.

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The American College of Physicians will present "Newer Aspects of Experimental and Clinical Allergy" Jan. 30-Feb. 3 at the Sheraton-Boston Hotel, Boston.

PHYSICIANS WANTED

Full time industrial physicians for permanent employment in DuPont Company plants. Excellent opportunity. General practitioner preferred. Salary open. Immediate opening at May Plant in Camden, S. C. Please write to: G. W. Hammon, Personnel Section, E. I. DuPont de Nemours & Co., Inc., Drawer "A", Camden, S. C. 29020.

Associate Medical Director, Full-Time, Interested in Preventive Medicine for Large Corporation in Winston-Salem, North Carolina. Generalist, Internal Medicine or Occupational Health Background Preferred. Desirable Age 30 to 45. Salary Commensurate With Experience. Reply Box 1, South Carolina Medical Association, 113 North Coit Street, Florence, S. C. 29501.

DOCTORS IN THE NEWS

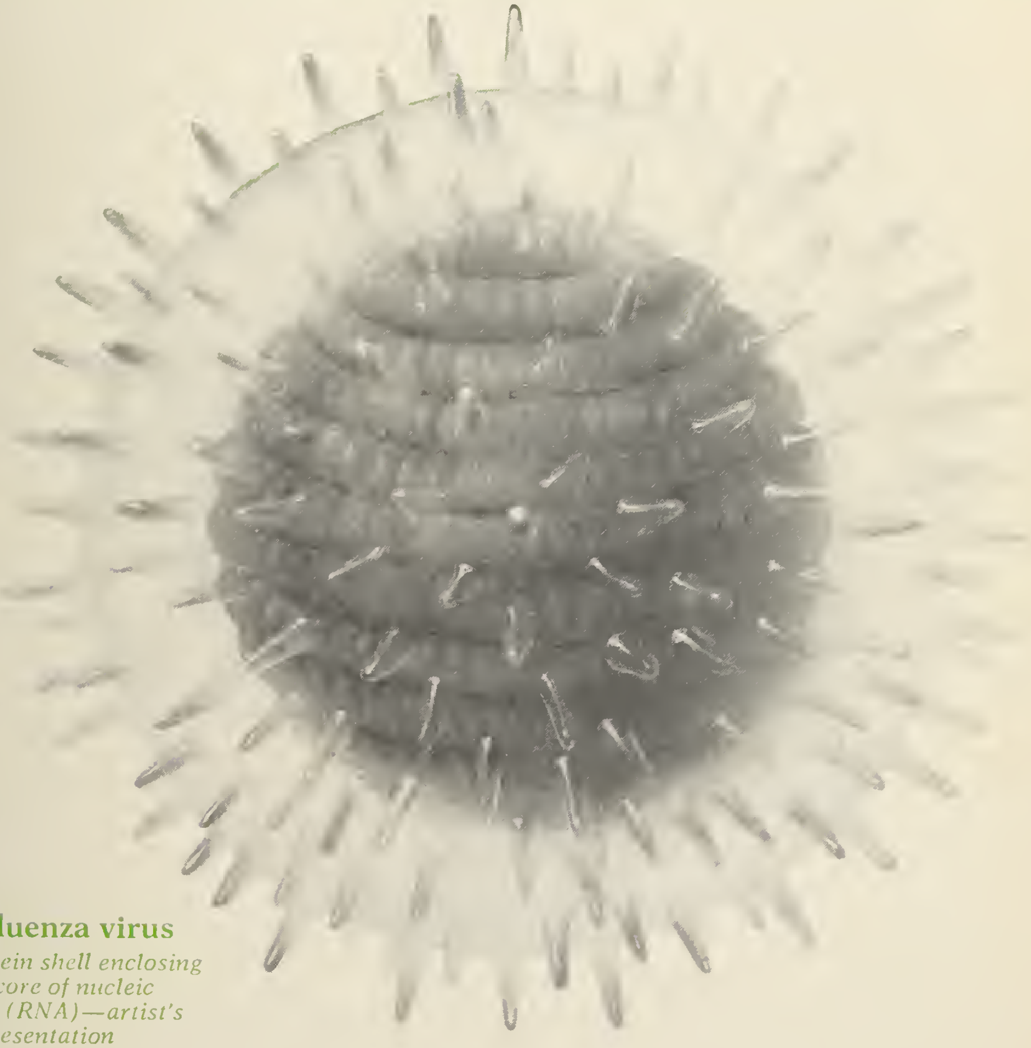
Dr. Layton McCurdy, formerly of Florence, has been named as a special consultant to the National Institute of Mental Health by Surgeon General William Stewart of the U. S. Public Health Service . . . . **Dr. D. C. Griggs** of Pageland was given a banquet in his honor in November by the Pageland Chamber of Commerce. Held in the social hall of the First Baptist Church, the banquet celebrated 40 years of his service to the community . . . . **Dr. George Colbert** has opened offices for the general practice of medicine at 7722 North Kings Highway near Ocean View Memorial Hospital, Myrtle Beach. Dr. Colbert, a native of Georgetown, was graduated from the School of Pharmacy of the Medical College of S. C. and was a pharmacist in Myrtle Beach in 1959. He subsequently returned to the Medical College and received a degree in medicine . . . . **Dr. Samuel M. Wilkes, Jr.**, surgeon, has joined the Springs' Medical Department as director of Industrial Medicine for Grace Bleachery, Fort Lawn and Kershaw Plant . . . . **Dr. James L. Hughes**, who had previously held this position, will move to Chester to become medical director for Gayle, Springsteen and Eureka Plants . . . . **Dr. Asbury C. Bozard** of Manning is the new president-elect of the South Carolina Chapter of the American Academy of General Practice. A member of the staff of the Clarendon Memorial Hospital, Dr. Bozard will take over as president at next year's convention in Clemson. He succeeds **Dr. J. Anthony White** of Easley, who has assumed the presidential duties from **Dr. George G. Durst** of Sullivan's Island. **Dr. Harrison Pebbles** of Estill was named vice-president succeeding **Dr. Hazel Baker King** of Lake City. **Dr. William J. Bannen** of Simpsonville and **Dr. Rufus Cain** of Dillon were re-elected secretary and treasurer, respectively. New board of directors member is **Dr. Garrison Lattimer** of Cayce. **Dr. J. Moultrie Townsend** of Charleston and **Dr. Robert Burley** of Clemson were named to a second term each on the board. Delegate of the American Academy of General Practice is **Dr. George Price** of Spartanburg. Alternate is **Dr. Horace Whitworth** of Greenville, a former president of the South Carolina chapter . . . . The annual Palmedico Pharmaceutical Co. award went to **Dr. Henley H. Hurt** of Cheraw, an intern at the Medical College of South Carolina . . . . **Dr. Julian P. Price** served as State Christmas Seal Campaign chairman this year. Serving as affiliate chairmen were **Dr. John L. Bundy** of Rock Hill, **Dr. E. M. Hicks** of Florence, **Dr. Robert L. Sawyer** of Saluda, **Dr. I. A. Ceips** of Ridge Spring, **Dr. J. Y. White** of Orangeburg, **Dr. Phillip P. Clayton** of Barnwell, **Dr. Thomas K. Fairey** of Edgefield and **Dr. N. S. Richardson, Jr.** of McCormick . . . . At a recent meeting of the State Board of Medical Examiners, **Dr. A. Richard Johnston** of St. George was elected president . . . . **Dr. E. A. E. Huggins** of Greenville was honored as the "oldest Elk" in South Carolina at a banquet recently.

Dr .C. Tucker Weston of Columbia was appointed South Carolina chairman of the 1967 March of Dimes in November. This is Dr. Weston's second consecutive year to serve in this capacity . . . . American Cancer Society's highest honor, the 1966 National Award went to a South Carolinian, **Dr. Eugene P. Pendergrass.** Dr. Pendergrass was born in Florence in 1895 . . . . **Dr. Dudley C. Beaty** of Bennettsville has been elected president of Marlboro County Mental Health Association . . . . **Dr. Sandra Catoe** of Kershaw began the practice of Pediatrics Nov. 14. She is a graduate of Kershaw High School, the University of South Carolina, and the South Carolina Medical College. She interned at the S. C. Medical College Hospital and had a two year residency in Pediatrics at the hospital . . . . **Dr. R. L. Crawford** of Lancaster was presented the 11th annual "Outstanding

Senior Citizen Award" November 1 during the Jaycees' Senior Citizen Award and Bosses Night banquet at the Lancaster Golf Club . . . . **Alexis Connor Higgins** of Florence has been promoted to the rank of lieutenant commander at the Naval Hospital in Portsmouth, Va., where he is head physician of the physical medical department. He is a son of Mrs. R. Connor Higgins of Florence and the late Mr. Higgins . . . . **Richard E. Hunton,** Greenwood physician, is the author of a book, his first, titled "Formula For Fitness," described as a "guide to the good life with equal emphasis on physical, mental and spiritual wellbeing." The book was published in November by Fleming H. Revell Co. of Westwood, N. J. It sells for $3.50 . . . . **Dr. Williard B. Mills,** Greenville physician and insurance company executive, addressed members of the Greenville chapter of the Administrative Management Society at a November meeting. Dr. Mills spoke on "Medicine '66." The Florence County Bar Association was host to a lawyer-doctor social gathering at Oakdale Country Club on Nov. 5 . . . . **Capt. Robert E. Jackson,** Manning general practitioner who was inducted into the U. S. Air Force last February, is presently operating a 120-bed hospital in Thailand, near the Laotion border. The majority of those treated at the hospital are native soldiers, casualties of the Viet Nam conflict. Capt. Jackson is a flight surgeon with the Air Commandos and is based at England Air Force Base in Alexandria, La., where he will be returning early February, 1967, for the final year's tour of duty. Udorn Air Force Base, in northern Thailand, is the American base he works out of, but spends his time at the native hospital in a nearby village . . . . It was recently announced that **Dr. George Price** of Spartanburg will represent the South Carolina chapter at the American Academy of General Practice meetings . . . . **Dr. B. J. Workman, Sr.** of Woodruff was honored in November by District 4 school officials for 35 years of service to public education. The physician-surgeon was presented an engraved bronze plaque and a 93-year-old bell from the first school he attended in Woodruff . . . . **Dr. John Van DeErve,** a Charleston dermatologist, was named vice-chairman of the section on dermatology at the Southern Medical Assn. annual meeting in November . . . . **Dr. James L. Wells** of Orangeburg and **Dr. Louis P. Jervey** of Charleston were elected members of the board of directors of Blue Shield of South Carolina at a fall meeting of the board . . . . **Dr. Jack W. Jervey, Jr.** of Greenville and **Dr. Howard Stokes** of Florence have been elected members at large of the executive committee of the Section of Ophthalmology of the Southern Medical Assn. The fall meeting was held in Durham, N. C. . . . . The Board of Trustees of the College of Charleston at its annual meeting in October named **Dr. Louie Boyd Jenkins** to the board to succeed **Dr. John Arthur Siegling.** He will serve for a term of six years . . . . **Dr. Jesse Blease Floyd** of Winnsboro was honored on Nov. 19 with the presentation of his portrait to Fairfield Memorial Hospital. The portrait was donated by friends of Dr. Floyd "in honor, love and esteem for his dedicated services to Fairfield County as a citizen, physician, and a friend to the people." The presentation was held in Mt. Zion Institute Auditorium . . . . **Dr. Robert F. Hagerty** has changed the address of his office for the practice of plastic and reconstructive surgery to Ashley House, Calhoun Street, West, Charleston.

New from Du Pont
Symmetrel
(Amantadine HCl)

The first oral chemical virostat for the prevention of influenza A_2



Influenza virus
Protein shell enclosing the core of nucleic acid (RNA)—artist's representation

The incidence of influenza A_2. In this country, where influenza is one of the leading causes of morbidity, influenza A_2 (Asian) continues to be a serious medical problem. In 1957 influenza A_2 was responsible for approximately 40,000 excess deaths in a three-month period. Since that year the most prevalent influenza virus has been A_2 (Asian).

What is Symmetrel®? "Symmetrel" (amantadine HCl) is a new synthetic chemical which acts as a molecular barrier to virus penetration. It provides for the first time specific oral medication for the prevention of respiratory infections caused by influenza A_2 (Asian) viruses—an entirely new approach in preventive medicine.

For prescribing information, see last page of this presentation

What Symmetrel® (amantadine HCl) means to you

...the first and only oral chemical agent to prevent influenza A_2 (Asian).

...not a vaccine or antibiotic, but a new synthetic chemical unrelated to any other chemotherapeutic agent.

...unique mode of action: prevents virus penetration of the host cell without affecting vital cell functions.

...specifically active against all influenza A_2 viruses tested to date.

...not indicated for the prevention of influenzal or respiratory illness other than influenza A_2 or for the treatment of established disease.

...does not interfere with normal antibody response; acts in concert with pre-existing antibody.

What Symmetrel® means to your patient

...possible immediate influenza A_2 protection when taken following suspected contact.

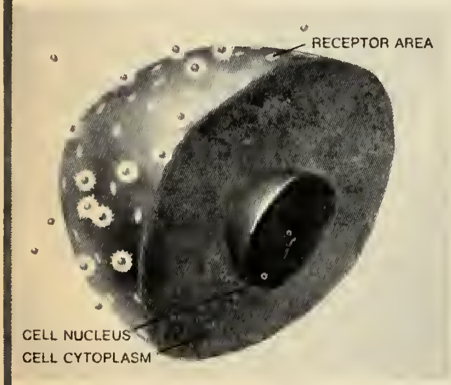
...may be particularly useful during outbreaks or epidemics and for high-risk patients in whom the occurrence of influenza A_2 is especially hazardous.

...a high degree of safety in clinical use.

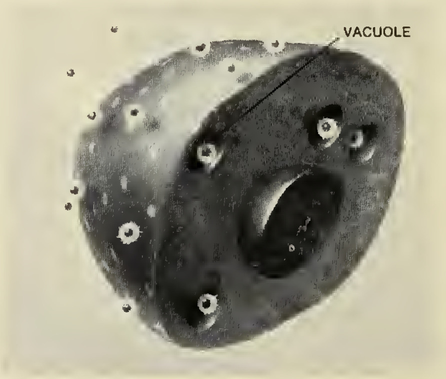
...simple once daily or b.i.d. dosage.

The mode of action of Symmetrel®

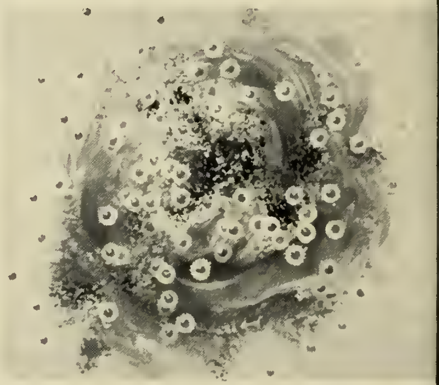
How the influenza virus invades and destroys the untreated cell



1 Viruses outside the cell attach themselves to specific cell receptor areas

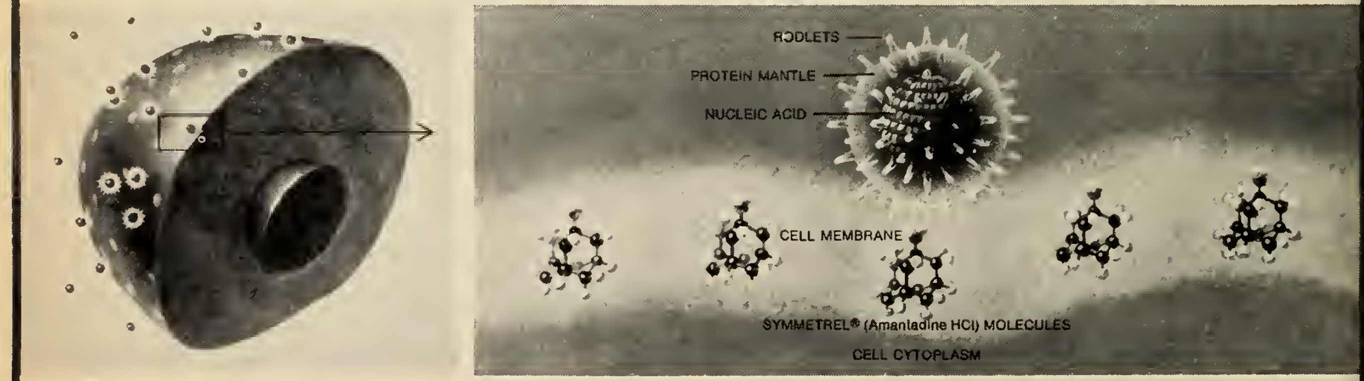


2 The virus is incorporated into a vacuole within the cell. From this vacuole the virus nucleic acid passes into the cell cytoplasm



3 The virus nucleic acid then directs the cell to produce both new virus nucleic acid and virus protein coat material which aggregate to form new virus particles. This process leads to the release of new virus particles and eventual destruction of the cell

How Symmetrel® (Amantadine HCl) prevents virus invasion[1]



Our current knowledge leads us to believe "Symmetrel" acts as a molecular barrier to influenza virus penetration. Shown here in a greatly enlarged section, "Symmetrel"— located at the cellular membrane—effectively prevents (blocks) virus penetration. Thus, "Symmetrel" does not directly destroy the virus particle but acting as a virostat prevents the cycle of virus penetration, virus replication, and cell destruction that is characteristic of virus invasion of animal cells (tissue). *Artist's conception based on current scientific knowledge.*

1. "Mode of Action of the Antiviral Activity of Amantadine in Tissue Culture", Hoffmann, C. E.; Neumayer, E. M.; Haff, R. F.; and Goldsby, R. A., Journal of Bacteriology *90*,623 (1965).

Safety of Symmetrel® Confirmed. When used as indicated, is generally well tolerated. No kidney, liver, bone marrow, or hematological disturbances have been observed.

Prescribing Information

Indications: "Symmetrel" is indicated for the prevention (prophylaxis) of influenza A_2 in persons of all age groups. Early use is recommended, preferably before or as soon as possible after actual or suspected contact with individuals suffering from influenza A_2. "Symmetrel" should especially be considered for high influenza-risk patient groups such as those suffering from chronic debilitating diseases and elderly persons.

Contraindications: Not indicated for the prevention of influenzal or respiratory illness other than influenza A_2 or for the treatment of established disease.

Warnings: Administration to patients with central nervous system disease, particularly geriatric patients with cerebral arteriosclerosis, and patients with a history of epilepsy or other "seizures," requires strict observation for possible untoward effects (see Adverse Reactions). Patients taking psychopharmacologic drugs, central nervous system stimulants, or alcoholic beverages should be observed for possible evidence of intolerance. Those patients who experience central nervous system effects or blurring of vision should be cautioned against driving or working in situations where alertness is important.

No teratogenic effects have been seen in reproductive studies in rats and rabbits. Studies in pregnant women have, however, not been done and use of this drug in women of childbearing age should be undertaken only after weighing the possible risks to the fetus against benefit to the pregnant patient. It should not be administered to nursing mothers since it is not known whether the drug is secreted in the milk.

Precautions: Ineffective against bacterial infections. Patients should be observed for idiosyncratic reactions as with all new drugs. Geriatric patients with pre-existing serious medical illnesses with mental or physical deterioration should be followed carefully medically while taking "Symmetrel." (See Adverse Reactions.)

Adverse Reactions: With higher than indicated doses manifestations of central nervous system effects such as nervousness, insomnia, dizziness, lightheadedness, drunken feeling, slurred speech, ataxia, inability to concentrate and some psychic reactions including depression and feelings of detachment were seen. Occasional blurred vision was reported at higher doses. Some of the milder and less pronounced symptoms above have been reported in a small number of patients taking the recommended dosage of 200 mg per day. Those were mostly transient and disappeared with continued administration of the drug. Some geriatric patients developed paranoid or hallucinatory behavior and became unmanageable while taking 200 mg daily. Medically unselected seriously deteriorated geriatric patients showed poor clinical tolerance after several weeks of daily dosing with 200 mg per day. One elderly patient with a history of prior cerebrovascular accident developed visual hallucinations and grand-mal convulsions while on drug at 800 mg per day. Some cases of dry mouth, gastrointestinal upset and skin rash and rarely, tremors, anorexia, pollakiuria, and nocturia have been also reported.

Safety: When used as indicated, is generally well tolerated. No kidney, liver, bone marrow, or hematological disturbances have been observed.

Dosage: *Adults:* Two 100 mg capsules (or 4 teaspoonfuls of syrup) as a single daily dose or the daily dose may be divided into one capsule of 100 mg (or 2 teaspoonfuls of syrup) twice a day.

Children: 1 yr.—9 yrs. of age: Calculate total daily dose on the basis of 2 mg to 4 mg per pound of body weight per day (but not to exceed 150 mg per day). Daily dose, given as the syrup, should be given in 2 or 3 equal portions.

9 yrs.—12 yrs. of age: Total daily dose 200 mg given as one capsule of 100 mg (or 2 teaspoonfuls of syrup) twice a day.

How Supplied: *Capsules:* Bottles of 100. Each red, gelatin capsule contains 100 mg amantadine HCl. *Syrup:* Bottles of 1 pint. Each 5 ml (1 teaspoonful) contains 50 mg amantadine HCl.

DU PONT

Symmetrel®

(Amantadine HCl)

A molecular barrier to virus penetration

arrest diarrhea

in • gastroenteritis • acute infections

LOMOTIL®

Each tablet and each 5 cc. of liquid contains:

diphenoxylate hydrochloride	2.5 mg.
(Warning: May be habit forming)	
atropine sulfate	0.025 mg.

Effectiveness: Lomotil possesses a unique degree of effectiveness in both acute and chronic diarrhea.

Convenience: Lomotil is supplied as small, easily carried, easily swallowed tablets and as a pleasant, fruit-flavored liquid.

Versatility: The therapeutic efficiency, safety and convenience of Lomotil may be used to advantage alone or as adjunctive therapy in diarrhea associated with:

- **Ulcerative colitis**
- **Acute infections**
- **Irritable bowel**
- **Regional enteritis**
- **Drug therapy**
- **Food Poisoning**
- **Functional hypermotility**
- **Malabsorption syndrome**
- **Ileostomy**
- **Gastroenteritis and colitis**

Dosage: For correct therapeutic effect—Rx correct therapeutic dosage. The recommended initial daily dosages, given in divided doses, until diarrhea is controlled, are:

Children: Age	Total Daily Lomotil Dosage	Lomotil Liquid Dosage (Each teaspoonful [4 cc.] contains 2 mg. of diphenoxylate HCl)
3-6 months .	3 mg.	½ tsp. 3 times daily
6-12 months .	4 mg.	½ tsp. 4 times daily
1-2 years . . .	5 mg.	½ tsp. 5 times daily
2-5 years . . .	6 mg.	1 tsp. 3 times daily
5-8 years . . .	8 mg.	1 tsp. 4 times daily
8-12 years .	10 mg.	1 tsp. 5 times daily

Adults: 20 mg. (2 tsp. 5 times daily or 2 tablets 4 times daily) Based on 4 cc. per teaspoonful. Maintenance dosage may be as low as one-fourth the initial daily dose.

Precautions: Lomotil, brand of diphenoxylate hydrochloride with atropine sulfate, is a Federally exempt narcotic preparation of very low addictive potential. Recommended dosages should not be exceeded. Lomotil should be kept out of reach of children since accidental overdosage may cause severe respiratory depression. Lomotil should be used with caution in patients with impaired liver function and in patients taking addicting drugs or barbiturates. The subtherapeutic amount of atropine is added to discourage deliberate overdosage.

Side Effects: Side effects are relatively uncommon but among those reported are gastrointestinal irritation, sedation, dizziness, cutaneous manifestations, restlessness, insomnia, numbness of extremities, headache, blurring of vision, swelling of the gums, euphoria, depression and general malaise.

SEARLE *Research in the Service of Medicine*

why wonder about a drug

when you know

DECLOMYCIN®
DEMETHYLCHLORTETRACYCLINE

is effective b.i.d.

It's made for b.i.d.

Effective in a wide range of everyday infections — respiratory, urinary tract and others — in the young and aged — the acutely or chronically ill — when the offending organisms are tetracycline-sensitive.

Contraindication — History of hypersensitivity to demethylchlortetracycline.

Warning — In renal impairment, usual doses may lead to excessive systemic accumulation and liver toxicity. Under such conditions, lower than usual doses are indicated and, if therapy is prolonged, serum level determinations may be advisable. A photodynamic reaction to natural or artificial sunlight has been observed. Small amounts of drug and short exposure may produce an exaggerated sunburn reaction which may range from erythema to severe skin manifestations. In a smaller proportion, photoallergic reactions have been reported. Patients should avoid direct exposure to sunlight and discontinue drug at the first evidence of skin discomfort.

Precautions and Side Effects — Overgrowth of nonsusceptible organisms may occur. Constant observation is essential. If new infections appear, appropriate measures should be taken. Use of demethylchlortetracycline during tooth development (last trimester of pregnancy, neonatal period and early childhood) may cause discoloration of the teeth (yellow-grey-brownish). This effect occurs mostly during long-term use but has also been observed in short treatment courses. In infants, increased intracranial pressure with bulging fontanels has been observed. All signs and symptoms have disappeared rapidly upon cessation of treatment. Side reactions include glossitis, stomatitis, proctitis, nausea, diarrhea, vaginitis and dermatitis. If adverse reaction or idiosyncrasy occurs, discontinue medication and institute appropriate therapy. Anaphylactoid reactions have been reported.

Average Adult Daily Dosage: 150 mg q.i.d. or 300 mg b.i.d. Should be given 1 hour before or 2 hours after meals, since absorption is impaired by the concomitant administration of high calcium content drugs, foods and some dairy products.

Capsules: 150 mg; *Tablets:* film coated, 300 mg, 150 mg, and 75 mg of demethylchlortetracycline HCl.

LEDERLE LABORATORIES, A Division of American Cyanamid Company, Pearl River, New York
417-6—4076

for noses of every description,
one safe and sure prescription:
Otrivin®
(xylometazoline CIBA)
on Rx only

- quickly relieves congested nose
- action is gentle, yet prolonged
- side effects are minimal

INDICATION: Nasal congestion. CONTRAINDICATION: Do not use in patients sensitive to small doses of sympathomimetic substances. WARNINGS: Prolonged or excessive use may cause rebound congestion. Use cautiously in patients with hyperthyroidism, coronary artery disease, hypertension, and diabetes. CAUTION: Do not shake Nasal Spray. Rinse Nasal Solution dropper or Nasal Spray tip in hot water after each use. No more than one person should use the same dropper bottle or nasal spray.

SIDE EFFECTS: Occasional local reactions: rebound congestion, slight burning or stinging, sneezing, dry nose. Occasional systemic effects: headache, drowsiness, lightheadedness, insomnia, palpitations. Overdosage in young children may produce profound sedation. DOSAGE: **Adults:** *Nasal Solution*—2 or 3 drops in each nostril every 4 to 6 hours. *Nasal Spray*—Squeeze rapidly once or twice in each nostril every 4 to 6 hours. **Children under 12:** *Pediatric Nasal Solution*—2 or 3 drops in each nostril every 4 to 6 hours. One drop should be used in infants under 6 months. *Pediatric Nasal Spray*—Squeeze rapidly once in each nostril holding tube upright; repeat every 4 hours as necessary. SUPPLIED: OTRIVIN® hydrochloride (xylometazoline hydrochloride CIBA) *Nasal Solution*, 0.1%; dropper bottles of 1 fluidounce, bottles of 1 pint. *Nasal Spray*, 0.1%; plastic squeeze tubes of 15 ml. *Pediatric Nasal Solution*, 0.05%; dropper bottles of 1 fluidounce. *Pediatric Nasal Spray*, 0.05%; plastic squeeze tubes of 15 ml. *Nasal Solutions* contain either 0.1% or 0.05% xylometazoline hydrochloride, triethanolamine, hydrochloric acid, sodium chloride, and phenylmercuric acetate 1:50,000 as preservative in water. *Nasal Sprays* contain either 0.1% or 0.05% xylometazoline hydrochloride, potassium phosphate monobasic, potassium chloride, sodium phosphate dibasic, sodium chloride, and benzalkonium chloride 1:5000 as preservative in water. *Consult complete literature before prescribing.*

CIBA Pharmaceutical Company, Summit, N. J.

CIBA

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MEDICAL COLLEGE OF SOUTH CAROLINA

MEDICAL COLLEGE EXPANSION ASSURED

On Friday, December 2, 1966, Governor Robert E. McNair announced with Dr. William M. McCord that the 8.25 million dollar federal grant for expanding facilities at the Medical College of South Carolina had been approved. The announcement was made through the Governor's office.

The approval of this grant from HEW along with 6 million dollars from the State of South Carolina approved last year has set in motion a number of plans to be completed.

Basically, the two grants totalling 15 million dollars will provide for the construction of two principal buildings — an administration and library building and a basic science and dental school building. Net new construction space will amount to 231,887 sq. ft.

The School of Dentistry will open this coming fall in existing facilities. Within two years time when the dental students begin their clinical years the new facilities will be ready for occupancy.

Dr. McCord said within 30 days after the plans are completed by the architects he hopes to see the bricks and mortar going.

More details and plans will be published as available.

The Alumni Professorial Chair Plan was inaugurated this month with the mailing to alumni of the Medical College of South Carolina of 3700 copies of the plan and letters from Dr. Thomas Galt in Spartanburg, chairman of the new program. It is the hope of the Alumni Association of the Medical College that all physicians in the state will participate by contributing $40 per year to help endow on a current and eventually permanent basis, two professorial chairs. Pharmacy and Nursing Alumni are also taking part in the joint effort.

Dr. Galt asked that those who have received the information return their donations and cards as soon as possible. He also wanted it made clear that any physician in the state is invited to help make the effort a success and can obtain information and forms from William D. Huff, Director, Office of Development, The Medical College of South Carolina, 80 Barre Street, Charleston, S. C. 29401. So far, this office has received better than 35 returns to support the chairs. Said Dr. Galt, "We've a long way to go and need hundreds more to participate but with everyone helping, we'll push this thing over the top." The annual goal is $85,000 for ten years, so it is obvious that many physicians, nurses, pharmacists and friends will have to step forward. We hope the dentists will soon play an important part in this move also.

The Health Sciences Foundation of the Medical College of South Carolina is recognized as an eleemosynary or charitable organization, so that contributions, gifts and bequests to the foundation qualify for the many tax deductions allowed by the Internal Revenue Service for these items. The Foundation can offer advice in the area of charitable contributions and tax deductions if this matter interests any of the friends of the Medical College.

Dr. Franklin C. Fetter, Dean of the School of Medicine, has been appointed First Vice President and Dean of the Medical College of South Carolina. As First Vice President, Dr. Fetter will have immediate oversight of all academic aspects of the Medical College.

Dr. McCord said, "The workload here has grown beyond the capabilities of one man. The changes reflect the growth of the Medical College which has reached a point where it takes the combined efforts of a large number of people operating in a satisfactory way to handle the administrative load."

Dr. Theodore G. Bernthal, chairman of the Department of Physiology, has been appointed to the National Institutes of Health's Physiology Fellowship Review Committee, effective July 1, 1967 through June 30, 1970.

Dr. Rhett Talbert, Professor of Neurology, represented the Medical College at the National Conference on Education in the Neurological Sciences held at the Greenbrier, White Sulphur Springs, West Virginia, November 13 through 16. The purpose was to obtain a "grass roots" survey of current teaching in the neurological sciences and from this base to formulate the best course for training programs in these fields in the coming decades.

James Hartle, president, Zimmer Manufacturing Company, Warsaw, Indiana, presented Dr. Curtis P. Artz, Chairman of the Department of Surgery, with the first commercial production model of the new air driven dermatome in special ceremonies at the Medical College on November 14. The new instrument was developed through a cooperative effort between Dr. Artz and Thomas S. Hargest, Bio-medical Engineer in the Department of Surgery and Zimmer Manufacturing Company.

The Medical College has received a grant in the amount of $10,000 from the Cancer Society of Greenville for the Cancer Registry, the purpose of which is to transfer all cancer patient information to IBM computers.

On November 1, Dr. Curtis P. Artz was the Visiting Professor at the University of Louisville and was presented the Yandell Medal and made a Kentucky Colonel. He gave a lecture at the Beaufort Naval Hospital on November 25 entitled "Treatment of Burns," and on November 28 he was guest speaker at the York County Medical Society where he spoke on "Surgical Aspects of Ulcer Disease."

Dr. George McCutchen of Columbia was the Department of Surgery's South Carolina Surgical Society Consultant on October 28; Dr. Claude W. Perry of Anderson acted as consultant on November 11.

Dr. Gilbert Bradham attended the Coastal Medical Society meeting in Walterboro last month and spoke on "Surgery in Vietnam."

Dr. H. B. Othersen has been accepted as an Associate Member of the American Academy of Pediatrics.

Dr. Lolita Pannel, Associate Professor of Bacteriology, has been awarded a grant, "The Role of Streptophage in Rheumatic Fever," by the Allergy and Infectious Diseases Institute of NIH. The grant is in the amount of $16,349 for the first year, and $42,400, plus indirect costs, for three additional years.

A very successful and enjoyable Alumni Reception was held at the Washington-Hilton Hotel, November 15, in Washington, D. C., during the Southern Medical Association annual meeting. President William M. McCord said, "The interest in the Alumni function, arranged by Dr. Jack C. Norris, Secretary of the National Alumni of the Medical College of South Carolina, was most encouraging." Special honor guests in attendance were: Edwin Schachte, Chairman of the Board of Trustees; Dr. J. G. Gailbraith, President of Southern Medical Association; Senator Strom Thurmond; Congressman Tom Gettys; Dr. M. O. Rouse, President-Elect of the AMA; Capt. B. H. Smith; J. Kelley Stone; and the Board of Trustees of the S.M.A. Also, some 70 alumni and wives were there.

Dr. E. O. Horger, III won first prize for the best residency presentation at the Atlanta meeting of the American College of Obstetricians and Gynecologists, held October 16 through 19. The title of his presentation was "Diabetes in Pregnancy."

The Professor of Neurosurgery at the Medical College of South Carolina, Dr. Julian R. Youmans, has been named Professor and Chairman of the Department of Neurosurgery at the University of California School of Medicine at Davis, California.

THE NEED FOR ANOTHER MEDICAL COLLEGE IN SOUTH CAROLINA

Frank C. Owens, M. D.
Columbia, S. C.

In the United States there is one doctor for every 680 persons. But what is the ratio in South Carolina? As of today, we have a population of approximately 2½ million people. There are registered with our State Board of Medical examiners 2,192 Doctors. This means that there are 1,140 persons per doctor in South Carolina and if we take the number of doctors, members of the South Carolina Medical Association – and there are 1,630 of those, we find that there are 1,533 persons in South Carolina for every member of the South Carolina Medical Association. So you see, we have, even today, about half the number of doctors that the nation has per capita. Our Charleston Medical College has been graduating 80 students per year and with the recent appropriation and grant, it will be able to graduate 102 doctors as a top limit. This number will not take care of the needed doctors even now; but let us look at the future. In 1960, our State had a population of 2,383,000 persons; in 1966, the estimated population is 2,543,000 persons; and the estimated population for 1980 – less than 15 years from now is 3,207,000 persons. Where are the doctors coming from to treat all of those people if we do not take steps now to graduate more of them. There is no such thing as an "instant doctor" nor an "instant Medical School." Action and planning must be started now if we are to meet the need.

Statistics on the shortage of doctors in this State are compelling but let us consider some of the more specific fields of shortage. There is not a hospital in South Carolina – except perhaps the South Carolina Medical College Hospital, which does not have a shortage of interns and residents. This has resulted in inadequate coverage of emergency rooms in many instances and inadequate coverage of the treatment of indigent patients and coverage of the Clinics.

When we get into the smaller communities and some of the larger cities we find the shortage of doctors brought home to the populace in their efforts to get a doctor when they need one and in the long waits in the doctors waiting room. While many a doctor can bear witness to the need of more doctors, it is the general public who is – to put it mildly – inconvenienced.

At a recent meeting of the South Carolina Municipal Association the energetic and forward looking President of the Association, Mayor Woody Brooks, of Andrews, pinpointed the need for doctors when he said – "Citizens are becoming more and more vocal to municipal officials about the shortage of general practitioners in small towns." He urged the Legislature to investigate and take whatever steps necessary to ease what he called an acute shortage.

We get an insight into the attitude of the College generation – those who will face and solve the problems of the future – through the Editorial page of the *Gamecock*, University of South Carolina publication in which Editor Dick Elliott says in part – "The need for a Medical School can hardly be questioned. A growing population, a higher income level of the State's people – all have contributed to the State's need for more doctors." Thus does the College generation recognize the need for more doctors.

The advent of Medicare and Medicaid under Title XIX is throwing an additional burden on the present supply of doctors and will grow greater.

While we hope and pray that wars will cease, we must realistically face the fact that the 39th Draft call for doctors took 17 doctors from our State's supply and four of them had extensive practices. Our Armed Services must be supplied with the Medical talent they need; but that has resulted in an additional drain on our doctor supply.

I believe that our Medical College should be backed to its fullest capacity. The recent fifteen million dollar allocation should enable our Medical College in Charleston to graduate 102 men per year. But that will not answer the need for doctors, even now and we must face the demand of our increasing population.

The question has been raised as to whether or not there are enough qualified men and women in this State to fill the quota of an additional Medical College. According to South Carolina Medical College statistics there are four applicants for every place at the Medical College. Of course, most of these applicants applied to other schools and there is a wide difference in the grade qualifications of those who did apply. We feel that if the college men and women of this State felt that there were openings for them in our Medical Schools that more of them would be interested in studying medicine. We also feel that the presence of a Medical College at the University of South Carolina would have an influence on the students there so that more of them would become interested in Medicine. There are also many who contend that the "A" student does not always make the best doctor and that some consideration might be given to desire and incentive and other traits, not to the exclusion of, but as well as academic achievement. There are many men who do not find themselves academically until the last year or two of College, and given the opportunity to study medicine they apply themselves with the result that they develop into excellent doctors. This opinion should not be interpreted as advocating a lowering of standard of admission but of broadening the base of entrance requirements to embrace a broader yardstick.

As to the location of another Medical College there are good arguments for several places but the logical location is the University of South Carolina. There are many reasons for this and we will recite a few of them.

First—there is already in existence at the University, a School of Pharmacy and a School of Nursing, both of which are closely allied fields with many functions which overlap functions of Schools of Medicine and Dentistry.

Second—for purposes of both teaching and research, a Medical School is best placed on a University Campus. Not only are chemistry and physiology more important than ever, but also mathematics, nuclear science, physics, engineering, electronics and computers have become directly applicable to medical and surgical problems in the space age. The partnership of the M. D. with the Ph. D. is a necessary one in our extensive and progressive medical research.

A *Third* strong point in the location of a Medical School at the University, is that we want an institution to serve the entire State. One of the determining factors in the location of the University in Columbia was for convenience of service and the center of the State furnished that convenience. We are not more than 2½ hours away from any section of the State. The importance of Columbia as a location for health institutions has been well recognized by the State Government, which has established the State Tuberculosis Sanatorium, State Mental Hospital and recently erected a separate and beautiful building for the State Board of Health.

A *Fourth* point is the adequate number of clinical beds for teaching and demonstration. In the Columbia, Providence and Baptist Hospitals we have a total of 1,000 beds and the Columbia Hospital plans a new branch. If we added the beds of our Government institutions, State and U. S. Government such as the State Hospital, State Tuberculosis Sanatorium, Veterans Hospital and Fort Jackson, we have a combined total of 7,907 hospital beds in Columbia. Figures show that the Columbia Hospital alone compares favorably with both the Medical College of South Carolina Hospital and Duke Hospital in the number of patients receiving out-patient care and the number of admissions to the Hospital. The site of Columbia for a medical college meets the requirements of the Association of Medical Colleges and the Committee on Education of the American Medical Association for the establishment of a four-year medical college.

A *Fifth* point favoring Columbia as a location for a Medical School is the service it would render the surrounding community. An excellent concept of the function of a Medical School is *Education, Research* and *thirdly, Service.* Cooperation between the State medical facilities already established here, would be facilitated and the ready access of the medical knowledge of the school would be easily available to the people from all over the State.

If we are to *realistically* meet the problems of our growing State and community — if we are to *maintain* and *improve* our medical service to our people we must let our vision extend beyond the realm of the status quo. We must plan for the future; and in order to consummate our plans, *take action now!*

THE PROS AND CONS OF A SECOND MEDICAL SCHOOL

Wm. M. McCord, M. D.

The administration of the Medical College of South Carolina has had several questions posed as to its position concerning the necessity of a second medical school in the state. Dr. William M. McCord, president of the Medical College of South Carolina, gave the following opinion.

"A second medical school in South Carolina would be an addition to our medical educational facilities," said Dr. McCord. He continued, "It is something to be given serious consideration in the future when the present Medical College of South Carolina has been expanded and is receiving annual support in such amounts as will assure its continued progress in modern medical education, treatment and research."

Dr. McCord said the Medical College is receiving realistic support from the state legislature. The institution also is using realistic figures concerning the cost of providing first class medical educational opportunities for the young people of South Carolina in all areas of the health sciences. He said it is imperative that the state's present 50 million dollar investment in the Medical College of South Carolina be protected and enhanced to its peak capacity before state funds are committed to another medical school.

Dr. McCord said that thirty years ago the Medical College of South Carolina had an annual budget of $500,000, and the present total budget amounts to almost $12,000,000. Up until recent years, a medical school faculty consisted mostly of part-time men who were paid little or no salary. That arrangement is no longer acceptable.

Dr. McCord said, "With the advent of computerized communications in education many changes in medical educational philosophy are taking place. The trend is toward the expansion in one place of large medical educational centers. No one knows what it will be, specifically, twenty years from now. It is generally considered in national educational councils that it costs equally as much to operate a medical school as it does an entire university."

Dr. McCord said a new medical school built in South Carolina today would cost approximately $45,000,000, plus $15,000,000 per year to operate for classes of 100 students per class.

"It is my opinion," said Dr. McCord, "that we should move slowly toward a new medical school because we cannot afford medical mediocrity in this state. I am afraid this would be a possibility if a second school were started now because of the dilution of state funds for medical education. Also, we must be sure we have an adequate number of qualified people in the student applicant pool." According to Dr. McCord, the national accrediting agencies would have the final say as to the adequacy of this pool.

Serious competition for students in medicine is coming from the physical sciences, such as the space programs, new fields of computer mathematics, and automation, and the status of "being a scientist." One reason there are four student applications for each freshman vacancy is that many students apply to several medical schools at once.

The newly-established S. C. Commission for the Blind, hoping to enlist the aid of every eye doctor in South Carolina, invited ophthalmologists from throughout the state to a meeting in Columbia on November 20 to interest them in participating in the program.

On November 11 and 12, a Regional Seminar on "Teaching Methods in Medical Technology" was held at the Sims Building of the South Carolina State Board of Health in Columbia. This seminar was organized by the South Carolina Society of Pathologists and the South Carolina Society of Medical Technologists and was sponsored jointly by the American Society of Medical Technologists and the American Society of Clinical Pathologists. This seminar was designed for pathologists and teaching supervisors in Schools of Medical Technology. Seminars of this type have been held in various places around the country, most of these cities and areas being considerably larger than ours. The Seminar attracted 87 registrants representing 19 states in addition to South Carolina.

The speakers included participants from South Carolina as well as two well-known physicians from outside the state. Dr. Elwood Baird from the Medical Branch of the University of Texas and Dr. L. W. Diggs, professor of medicine, at the University of Tennessee Medical School.

MEETINGS

The dates of the 1967 Watts Hospital Symposium have been set for February 17 and February 18. The program will be held at the Jack Tar Hotel in Durham as in past years.

The Lower Florence County Hospital in Lake City was formally opened on November 6. James R. Felts, Jr. of Charlotte, head of the Hospital and Child Care Sections and assistant secretary of The Duke Endowment, gave the dedication address.

New Members, SCMA

Dr. Themis J. Chekaris
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Dr. Patrick H. Dennis
Ashley House, Lockwood Blvd.
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Dr. Charles R. May, III
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Dr. Edgar E. Strong
1654 Longwood Dr.
Florence

Deaths

Dr. William C. Thompson

Dr. William C. Thompson, 83, of Anderson died November 8 in a local hospital after an illness of three weeks.

He attended Clemson College and graduated from the Atlanta, Ga., School of Medicine (now Emory University) in 1910. From 1911 to 1944 he practiced medicine in Georgia, starting the first hospital in Dublin, Ga., in 1913. From 1944 and 1950 he was the senior medical evaluation officer with the Veterans Administration in Atlanta. From 1950 until his death he was in private practice in Anderson.

During World War I he was a medical examiner with the armed forces. He also served one year on the Georgia State Board of Health.

He was a member of the Anderson County Medical Society, the Medical Society of Laurens County, Ga., a Rotarian, and a 32nd degree Scottish Rites Mason.

Dr. Paul M. Connor

Dr. Paul M. Connor, 98, retired physician of Neeses died recently in a nursing home. Dr. Connor was born in Orangeburg County.

ABSTRACTS

Laceration of abdominal aorta and study of intact abdominal walls as tamponade: Report of Survival and Literature Review. By A. J. Richards, Jr., M. D., Pano A. Lamis, Jr., M. D., James T. Rogers, Jr., Gilbert B. Bradham, M. D. (Charleston). Ann Surg 164:321, August 1966.

It has been generally appreciated by surgeons treating large vessel wounds that soft tissue compression of the vessel aids in hemostasis. Despite this general knowledge, the role of the abdominal wall has not been previously fully explored.

During the operative treatment of several patients sustaining gunshot perforations of the abdominal aorta, it was noted that hemorrhage appeared more profuse once the abdominal wall was opened. It was hypothesized that the intact abdominal wall acted as a tamponading agent. Once the laparotomy incision was made, relieving significant pressure, bleeding accelerated, lending to more rapid deterioration of the patient.

To test such an assumption, animal experiments were done which proved that animals died more rapidly if bled from the aorta against atmospheric pressure than if bled into an intact abdominal cavity.

These results point to the clinical necessity of a complete organization of the operating team, instrumentation, and transfusion apparatus prior to laparotomy. The results also point to the necessity of providing transthoracic or intraluminal balloon control of the abdominal aorta prior to exploring the site of the aortic perforation.

Reconstruction of the lower eyelid, by Robert F. Hagerty, M. D., and Randolph D. Smoak, Jr., M. D. (Charleston). Plastic and Reconstructive Surgery 38:52.

A method of lower lid reconstruction has been described which includes the following principles and advantages:

1. Reconstruction of the lower lid from adjacent infraorbital and cheek tissue, thus avoiding dissimilarities of color and texture.
2. Maintenance of the vertical height of the lower lid through incorporation of a free autogenous ear cartilage graft.
3. Avoidance of injury and resultant deformity to the upper eyelid.

Book Reviews

PSYCHIATRY IN THE PRACTICE OF MEDICINE, by Allen J. Enelow, M. D. and Murray Wexler, Ph. D. Oxford University Press, Inc., New York. 1966. Pp. 343. $7.

During the past several years, there has been an increasing number of books published in an attempt to help the physician understand and deal with psychiatric problems in the practice of medicine; however, few of these offer new or practical approaches. Drs. Enelow and Wexler's book is helpful, refreshing, and lucid in its model of integrating psychiatry into medicine.

An admixture of discussions of typical clinical cases from the nonpsychiatrist physician's practice, chapters on psychopharmacology, communication, psychiatric emergencies, etc., make up the content. The exposition of "the treatment approach most applicable to the daily practice of medicine is process-oriented psychotherapy" should be of special benefit to the practicing physician.

Rather than or in addition to the chapter on "Contemporary Psychotherapy," the reviewer wishes that the authors had discussed more of their ideas and recommendations pertaining to group counselling or therapy in medical practice and how the family physicians should view electro-convulsive therapy, hypnosis, and birth control pills.

The authors have years of experience in teaching the nonpsychiatrist physician, psychiatrists, and medical students in utilizable diagnostics, interviewing techniques, and psychotherapy. They know how and what to teach.

R. R. Mellette, Jr., M. D.

PINEHAVEN SANATORIUM. Recollections, Reminiscences and Reflections of its Erstwhile Medical Director. By William Atmar Smith, M. D., LL. D., Charleston, S. C. 1966. $3.00. Paper back $2.00.

The story of the first effort in Charleston to control tuberculosis by the use of hospital care is told in this little book by the man who was the consistently active leader in the fight against the disease. The effort was twofold, — first, to control disease in the patient and second, to prevent the spread of infection by removal of the tuberculous patient from his social contacts.

In 1922 under the persuasion of Dr. Leon Banov, the Charleston County Legislative Delegation appropriated funds for construction of the rather rudimentary first sanatorium, which grew and improved under its Medical Director, Dr. W. Atmar Smith, eventually achieving new form and importance in the new Pinehaven structure on Calhoun Street. This building is now a part of the Charleston County Hospital.

Dr. Smiths recollections are written with feeling and sympathy in a simple readable narrative. His book should be of much interest to all those who have had any sort of touch with Pinehaven and to all who are concerned with local history.

Joseph I. Waring, M. D.

HEMATOLOGIC PROBLEMS IN THE NEWBORN. Volume IV in the Series, Major Problems in Clinical Pediatrics. By Frank A. Oski, M. D. and J. Lawrence Naiman, M. D. 294 pages. W. B. Saunders Company, Philadelphia and London, 1966. $11.

With the increasing scope of knowledge of hematologic disorders it has become apparent that the newborn infant deserves a special place in view of the uniqueness of many of his problems. This text covers the problem beautifully with an excellent review of the basic pathophysiology as well as the clinical approach, including differential diagnosis and an explicit resumé of therapy of the various abnormalities.

Normal blood values of infancy and the effect both beneficial and pathologic of the maternal-foetal relationship are reviewed in the early sections. Next the various types of anemia in the neonatal period are subdivided into those due to hemorrhage, disorders of red cell metabolism, disorders of hemoglobin synthesis, and erythroblastosis. The last is discussed very concisely and an easily followed program for clinical management is given. Lastly, the disturbances of blood coagulation including thrombocytopenia in the newborn is covered with charts showing the method of differential diagnosis on the basis of easily performed coagulation studies.

This text provides an excellent review of this complicated subject in a very readable form and would be an excellent book for any practitioner dealing with patients of this age group. It can be highly recommended.

Charlton deSaussure, M. D.

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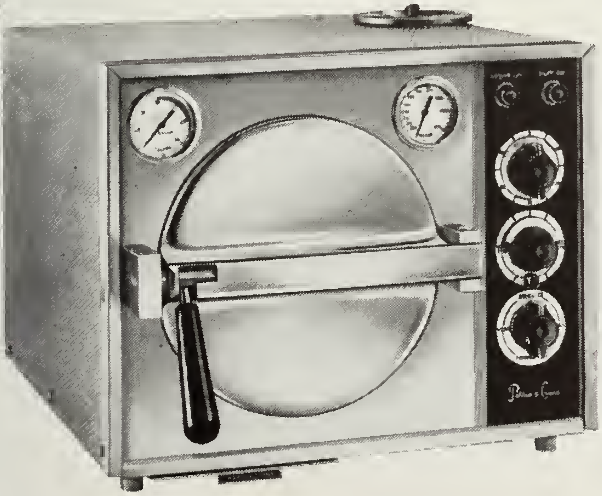

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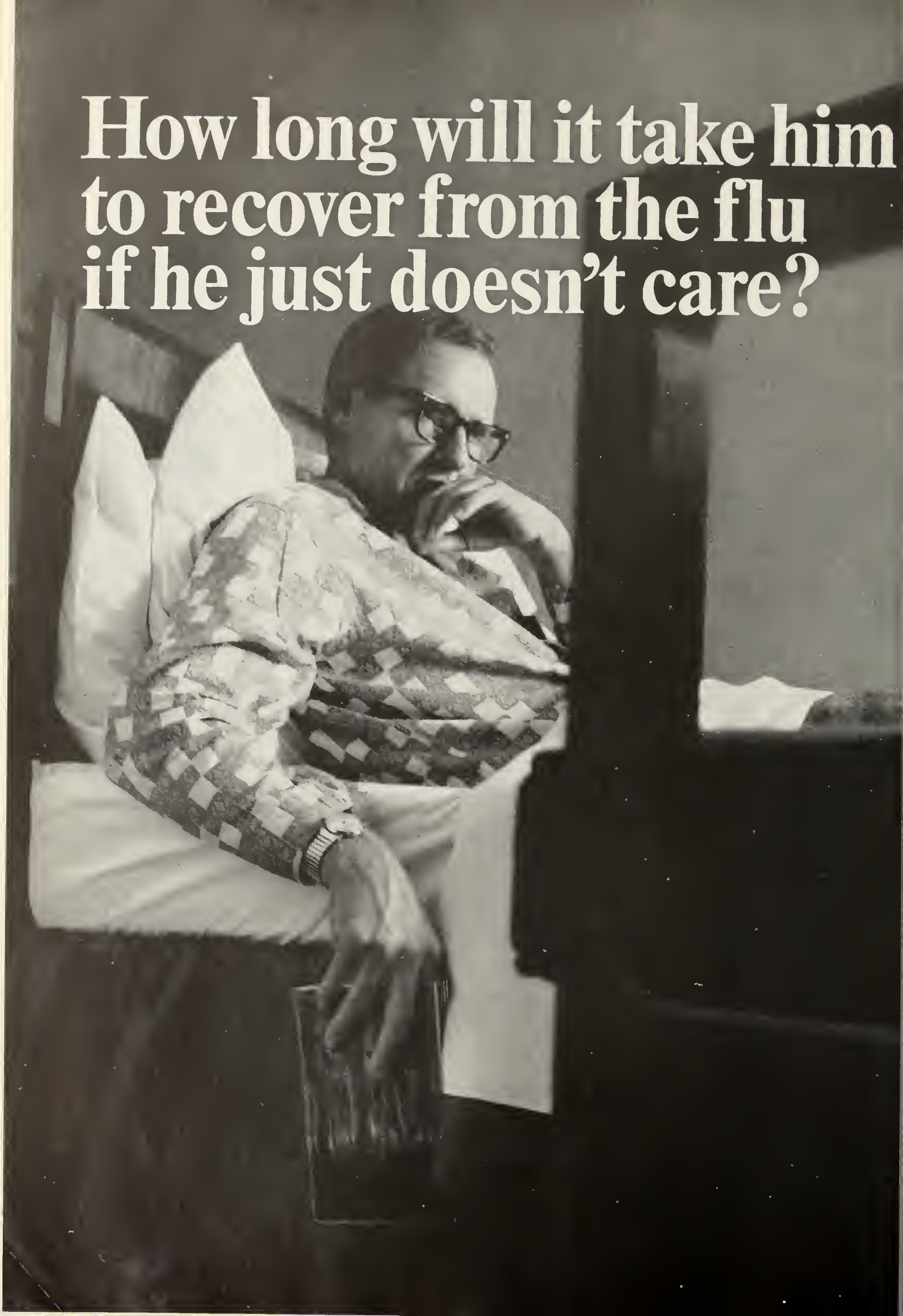
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†The need for these substances in human nutrition has not been established.

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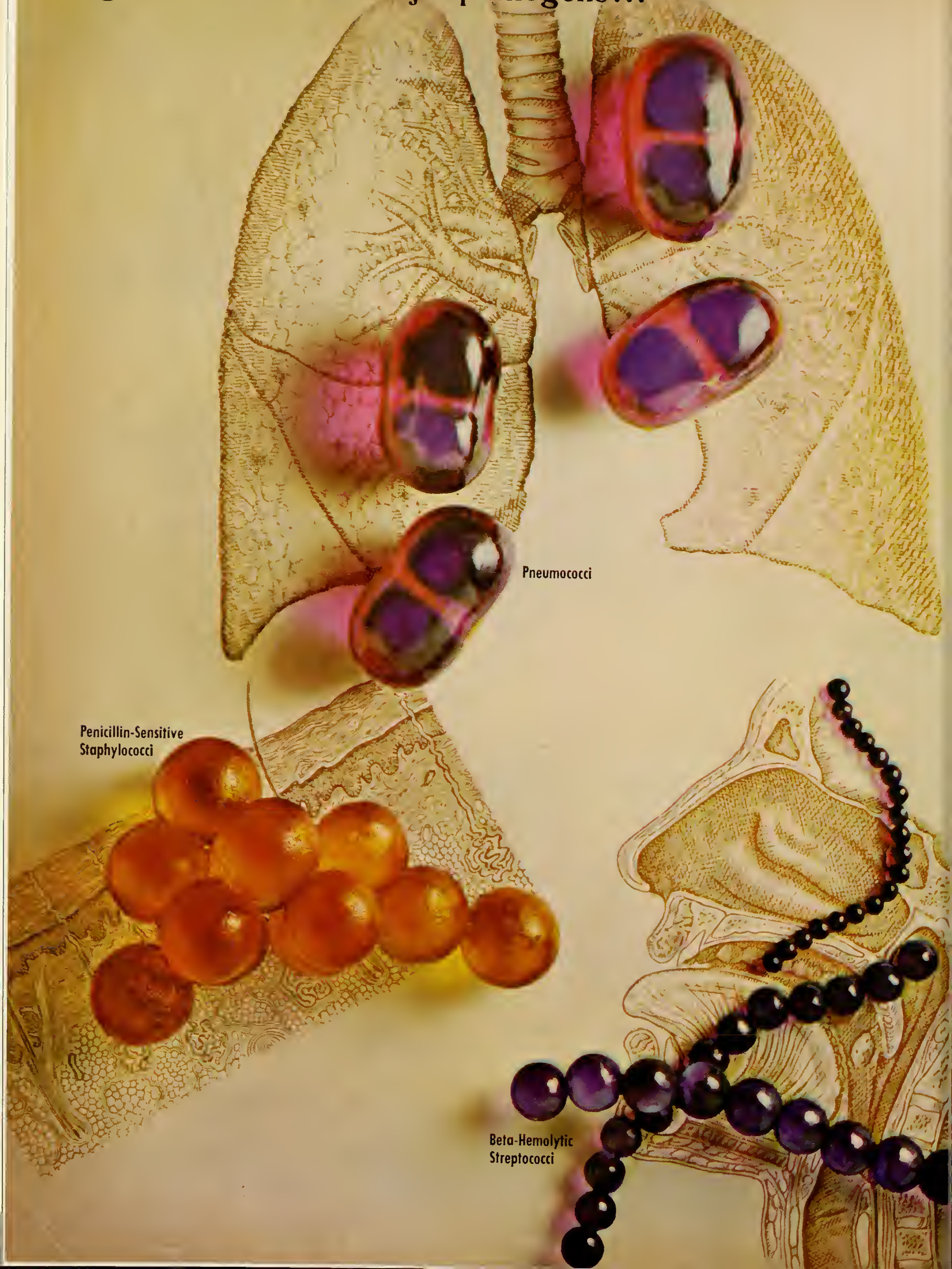
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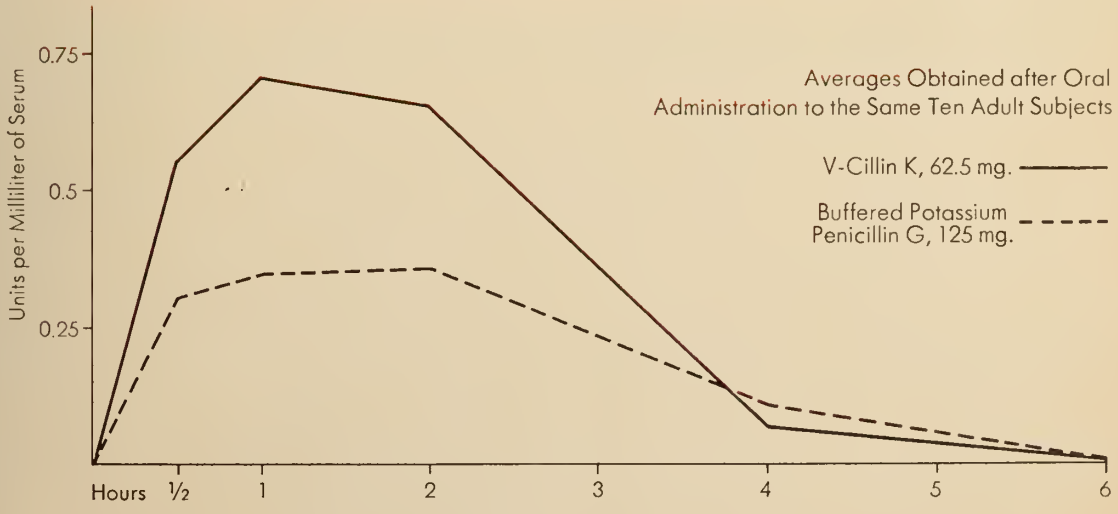
Penicillin G	0.02	0.005-1.6	0.005	0.002-0.2	0.02	0.01-0.1
Methicillin	1.6	0.4-6.3	0.2	0.1-0.4	0.2	0.1-1.6
Oxacillin	0.4	0.1-3.1	0.04	0.02-0.4	0.1	0.04-0.8
Cloxacillin	0.2	0.2-0.8	0.1	0.1-0.8	—	—
Nafcillin	0.4	0.2-0.8	0.04	0.02-0.1	0.02	0.02-0.2
Ampicillin	0.2	0.1-0.8	0.02	0.01-0.04	0.02	0.01-0.04

Adopted from Klein, J. O., and Finland, M. New England J. Med ,269 1019, 1963.

with high blood levels, even in the presence of food



Adopted from Griffith, R. S., and Black, H. R.: Current Ther. Res., 6 253, 1964.

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Potassium Phenoxymethyl Penicillin

(See next page for prescribing information

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V-Cillin K, Pediatric, is an oral solution of clinically proved V-Cillin K in teaspoon dosage form. When mixed as directed, each 5 cc. (approximately one teaspoonful) will contain 125 mg. (200,000 units) phenoxymethyl penicillin as the potassium salt.

Indications: V-Cillin K has been shown to be effective in the treatment of streptococcus, pneumococcus, and gonococcus infections as well as infections caused by sensitive strains of staphylococci. It may be used for the prophylaxis of streptococcus infections in patients with a history of rheumatic fever and for the prevention of bacterial endocarditis after tonsillectomy and tooth extraction in those patients with a history of rheumatic fever or congenital heart disease.

Contraindication: V-Cillin K should not be administered to a patient with a history of penicillin hypersensitivity.

Precautions: V-Cillin K should be used cautiously, if at all, in a patient with a strongly positive history of allergy. Reactions occur more frequently in individuals with bronchial asthma or other allergies or in those who have previously demonstrated sensitivity to penicillin. hypersensitivity reactions occur, the drug should be discontinued.

Adverse Reactions: Although serious allergic reactions are muc less common with administration of oral penicillin than with intramusc lar forms, skin rash, symptoms resembling those of serum sickness, other manifestations of penicillin allergy may occur. When penicillin administered, measures for treating anaphylaxis should be readi available. Those include epinephrine, oxygen, and pressor drugs f relief of immediate allergic manifestations as well as antihistamin and corticosteroids for delayed effects.

The use of antimicrobial agents may be associated with the ove growth of antibiotic-resistant organisms; in such a case, antibiotic a ministration should be stopped and appropriate measures taken.

Administration and Dosage: For Tablets V-Cillin K and for V-Cill K, Pediatric, the usual dosage ranges from 125 mg. (200,000 unit three times a day to 500 mg. (800,000 units) every four hours. For i fants, the daily dosage may be 50 mg. per Kg. of body weight divide into three doses.

Beta-hemolytic streptococcus infections without associated bact remia may be treated with 200,000 to 400,000 units three times a da Therapy should be continued for a minimum of ten days to prevent d velopment of rheumatic fever and/or other serious complications. Do age for routine streptococcus prophylaxis in patients with a history rheumatic fever or congenital heart disease may be 200,000 units onc or twice daily. When such patients undergo tonsillectomy, tooth extra tion, or other minor surgery, the prophylactic dose should be 500,00 units every six hours given two days prior to surgery and for two day postoperatively. If oral medication is not feasible on the day of su gery, parenteral therapy should be considered. Mild to moderatel severe pneumococcus pneumonia has been treated effectively wi 250 mg. every six hours.

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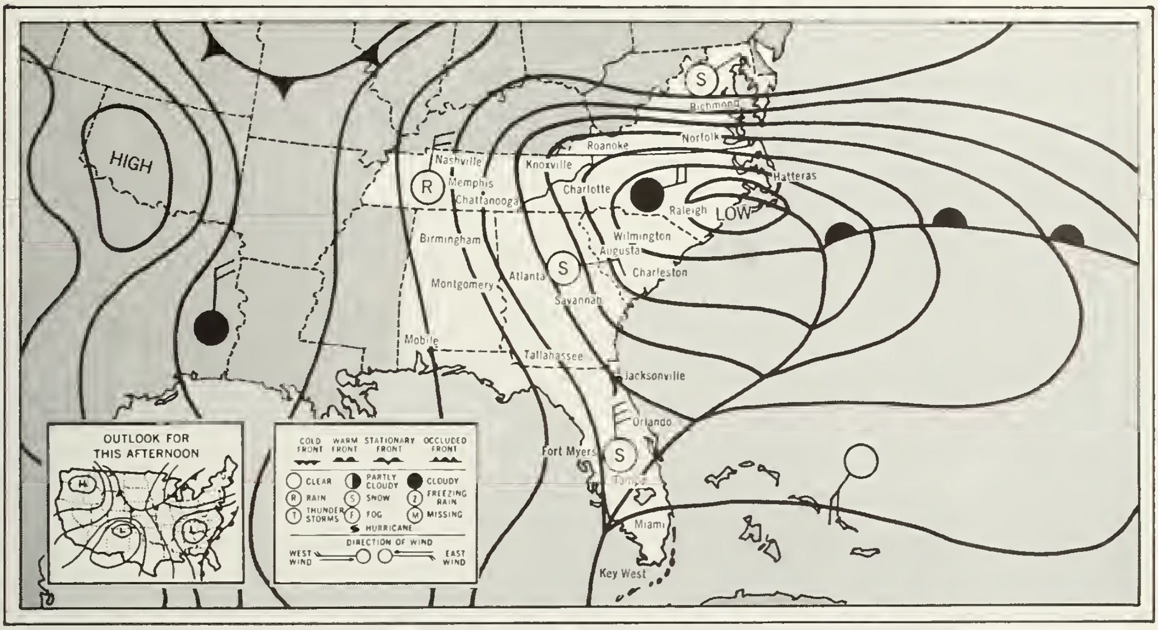

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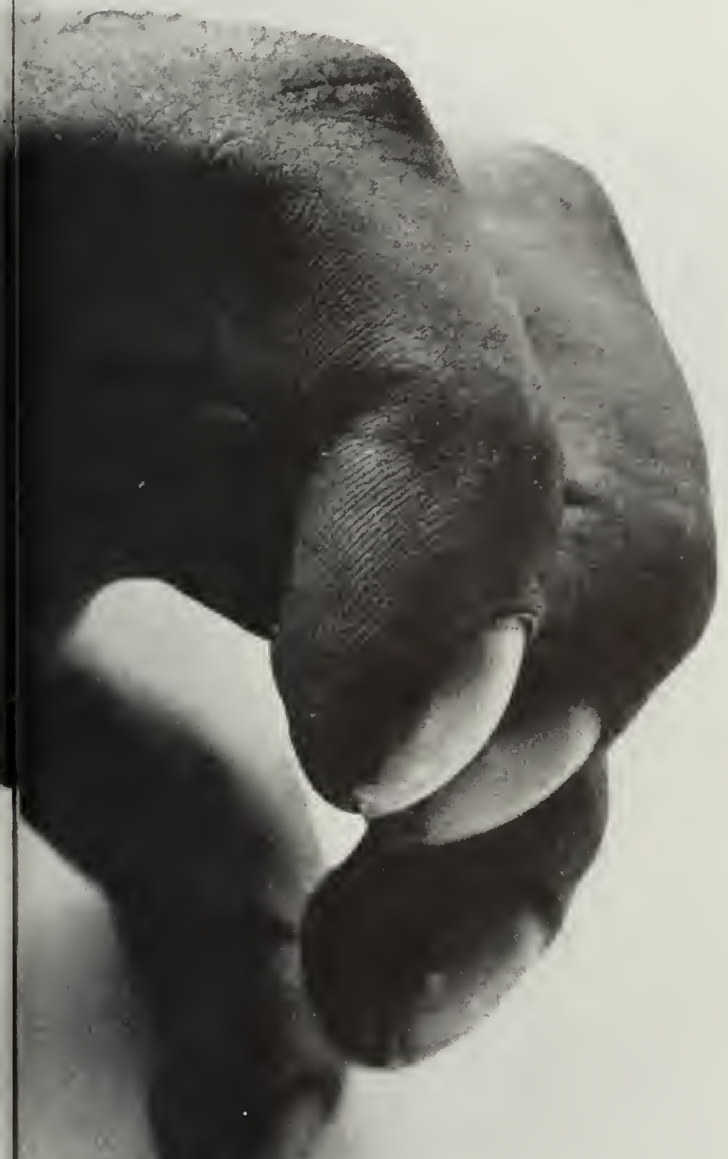

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Contraindications: Tuberculous, fungal, and most viral lesions of the skin (including herpes simplex, vaccinia, and varicella). Not for ophthalmic use. Contraindicated in individuals with a history of hypersensitivity to any of its components. **Precautions:** Neomycin rarely produces allergic reactions. Prolonged use of any antibiotic may result in overgrowth of nonsusceptible organisms; if this occurs, appropriate therapy should be instituted. Where severe local infection or systemic infection exists, the use of systemic antibiotics should be considered, based on susceptibility testing. While topical steroids have not been reported to have an adverse effect on pregnancy, the safety of their use on pregnant females has not absolutely been established. Therefore, they should not be used extensively on pregnant patients, in large amounts, or for prolonged periods of time. **Side Effects:** Side effects are not ordinarily encountered with topical corticosteroids. As with all drugs, however, a few patients may react unfavorably to Neo-Synalar under certain conditions. **Availability:** Neo-Synalar Cream (0.025% fluocinolone acetonide, neomycin sulfate, equivalent to 0.35% neomycin base), 5 and 15 Gm. tubes.

References: 1. Pillsbury, D. M., Shelley, W. B., and Kligman, A. M.: A manual of cutaneous medicine, Philadelphia, Saunders, 1961, p. 79. 2. Barber, M., and Garrod, L. P.: Antibiotic and chemotherapy, Baltimore, Williams and Wilkins, 1963, p. 111.

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In clinical trials[1,2], this orange-flavored tablet was given to 55 patients, aged four months to 18 years.

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Therapy was given from three to 12 days, with an average of six days.

Of the 55 patients, 30 were reported cured within 72 hours, while 22 showed partial recovery within the same time, and subsequent clinical cure.

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Dosage was maintained from three to 10 days; average treatment was five days. All of the ill children accepted the orange-flavored suspension favorably.

53 were clinically cured within 72 hours, while 32 showed partial relief within the same time, and subsequent clinical cure.

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A clinical cure rate of 97.7%

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Brief Summary on next page

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1. Case Reports on File, Dept. Clin. Development, Abbott Laboratories.
2. Polley, R.F.L., Use of Erythromycin-Sulfas in Office Practice, Western Med., 7:177, July, 1966.

ERYTHROCIN®-SULFAS
Brief Summary

Contraindications: Known sensitivity to erythromycin or sulfonamides. Because of the possibility of kernicterus with sulfonamides, do not use in pregnancy at term, premature or newborn infants.

Warnings: As with other forms of sulfonamide therapy, carefully evaluate patients with liver or kidney damage, urinary obstruction, or blood dyscrasia. Deaths have been reported from hypersensitivity reactions and blood dyscrasias following use of sulfonamides. Perform blood counts and liver and kidney function tests if used repeatedly at close intervals or for long periods.

Precautions, Side Effects: Occasionally mild abdominal discomfort, nausea or vomiting may occur with erythromycin, generally controlled by reduction of dosage. Mild allergic reactions (such as urticaria and other skin rashes) may occur. Serious allergic reactions have been extremely infrequent. Use sulfonamides with caution in patients with a history of allergy. Assure adequate fluid intake to prevent crystalluria and institute alkali therapy if indicated. If overgrowth of nonsusceptible organisms occurs, withdraw the drug and institute appropriate treatment. If a patient should show signs of hypersensitivity, appropriate countermeasures (e.g. epinephrine, steriods, etc.) should be administered and the drug withdrawn.

Adverse Reactions: Sulfonamide therapy may be associated with headache, nausea, vomiting, urticaria, diarrhea, hepatitis, pancreatitis, blood dyscrasias, neuropathy, drug fever, skin rash, injection of the conjunctiva and sclera, petechiae, purpura, hematuria and crystalluria.

Side effects due to erythromycin are infrequent, but occasional abdominal discomfort, nausea, or vomiting, urticaria and other skin rashes may occur.

Supplied: The Granules for Oral Suspension come in bottles of 60 ml. and 150 ml. The Chewable tablets are in bottles of 50. Each 5-ml. teaspoonful of reconstituted Granules or each Chewable tablet provides erythromycin ethyl succinate equivalent to 125 mg. of erythromycin activity and 167 mg. of each of sulfadiazine, sulfamerazine and sulfamethazine.

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DIARRHEA
MUCOUS COLITIS
DIVERTICULITIS
SPASTIC URETERITIS
BLADDER SPASM

are relieved with.....

WPP

Trocinate®

BRAND THIPHENAMIL HCl

Minimum dosage 400 mg., q. 4 h. until relief is constant, adjust maintenance dosage.

A therapeutic blood level cannot be obtained with small dosage. Trocinate is metabolized and eliminated in the urine as harmless degradation products—a safety factor. Sixteen years of clinical usage with the absence of untoward effects establishes the safety of Trocinate. The autonomic nervous system is not involved in its prompt action.

NOW AVAILABLE IN 2 STRENGTHS,
100 mg. and 400 mg.
PINK SUGAR-COATED TABLETS

Literature and samples available.

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RICHMOND, VIRGINIA 23217

Manufacturers of ethical pharmaceuticals since 1856

Estomul does what standard anticholinergics fail to do—it provides a continuous climate for ulcer healing, eliminating the peaks and valleys of ordinary therapy. It is a comprehensive formulation providing sustained antisecretory effect on gastric activity. A recent study[1] reported a 56% satisfactory response with a maintenance schedule of Estomul in patients refractory to all previous medication. In less difficult peptic ulcer patients, a second study[2] noted a 94% satisfactory response. Both studies confirmed this clinical improvement radiologically. And both reported unusually prolonged reduction of basal secretion. With a maintenance course of Estomul therapy you can provide this continuous climate for healing in your own peptic ulcer patients.

A continuous climate for ulcer healing

(not simply episodic reduction of secretion or motility)

Estomul®

Tablets
Each swallow tablet contains: orphenadrine hydrochloride, 25 mg.; bismuth aluminate, 25 mg.; magnesium oxide, 45 mg.; aluminum hydroxide—magnesium carbonate (as co-precipitate), 500 mg.

Good-Tasting Liquid
Each tablespoon (15 cc.) contains: orphenadrine hydrochloride, 25 mg.; bismuth aluminate, 50 mg.; aluminum hydroxide—magnesium carbonate (as co-precipitate), 918 mg.

Dosage: 1 or 2 tablets or 1 or 2 tablespoons 3 times daily.

Supplied: In bottles of 100 tablets or 12 fluid oz..

Side Effects: Doses in excess of 6 tablets or 6 tablespoons daily may produce dryness of mouth or blurring of vision. Other possible side actions include: tachycardia, palpitation, urinary hesitancy or retention, dilatation of the pupil, increased ocular tension, weakness, nausea, vomiting, headache, dizziness, constipation, drowsiness, urticaria and other dermatoses. Infrequently, an elderly patient may experience some degree of mental confusion.

Contraindicated: In glaucoma, pyloric or duodenal obstruction, stenosing peptic ulcers, prostatic hypertrophy or obstruction at the bladder neck, achalasia and myasthenia gravis.

References: 1. McHardy, G. G., Judice, R. C., McHardy, R. J., and Cradic, H.: Southern Med. J. *59*:459 (April) 1966. 2. Slanger, A.: Western Med. *6*:205, 1965.

Riker Riker Laboratories • Northridge, California 91324

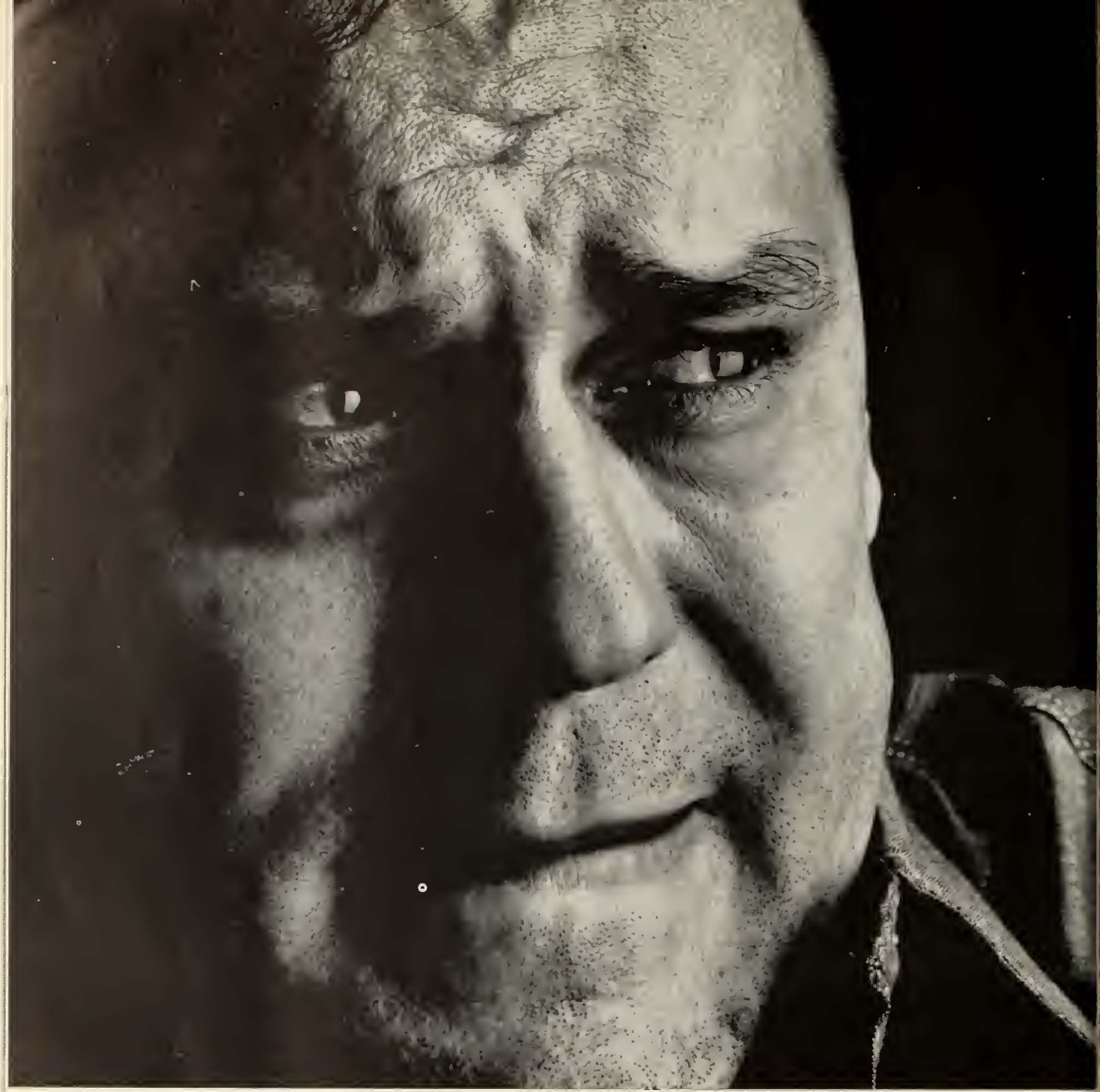


Photo professionally posed

Mike expects a penicillin injection. He's about to be pleasantly surprised.

His physician is going to prescribe an oral penicillin —Pen • Vee® K (potassium phenoxymethyl penicillin). It's usually so rapidly and completely absorbed that therapeutic serum levels are produced in 15 to 30 minutes. Higher serum levels generally last longer than with oral penicillin G.

Indications: Infections due to pathogens susceptible to oral penicillin G. Prophylaxis of rheumatic fever in patients with previous history of the disease.

Precautions: Skin rash, symptoms resembling those of serum sickness, or other manifestations of penicillin-allergy may occur. Measures for treating anaphylaxis should be readily available: epinephrine, oxygen and pressor drugs for relief of immediate allergic reactions; antihistamines and corticosteroids for delayed effects. Penicillin may delay or prevent the appearance of primary syphilitic lesions. Patients with gonorrhea who are suspected of concurrent syphilitic infections should be tested serologically for at least 3 months. Where lesions of primary syphilis are suspected, dark-field examination should precede use of penicillin. As with other antibiotics overgrowth of nonsusceptible organisms may occur; if so, discontinue and take appropriate measures. Treat β-hemolytic streptococcal infections with full therapeutic dosage for at least 10 days to prevent development of rheumatic fever or glomerulonephritis.

Contraindications: Infections caused by nonsusceptible organisms; history of penicillin sensitivity.

Composition: Tablets—125 mg. (200,000 units) and 250 mg., (400,000 units); Liquid—125 mg. (200,000 units) and 250 mg. (400,000 units) per 5 cc. Wyeth Laboratories Philadelphia, Pa.

ORAL **Pen • Vee® K**

(potassium phenoxymethyl penicillin) Wyeth®

“Take a laxative” is a harsh sentence

Although there are more than 60 ethical laxatives available for the constipated patient, many, unfortunately, do not really produce an effect much like a normal bowel movement. Instead they whip the bowel, torment it and leave it irritated, inflamed and exhausted.

On the other hand, Dulcolax provides a nearly normal movement. Through its unique contact action, it induces the kind of natural contraction waves of the colon necessary for gentle, complete, comfortable bowel movements.

For your next constipated patient, try Dulcolax the laxative with the gentle touch.

Dulcolax, brand of bisacodyl tablets (5 mg.)

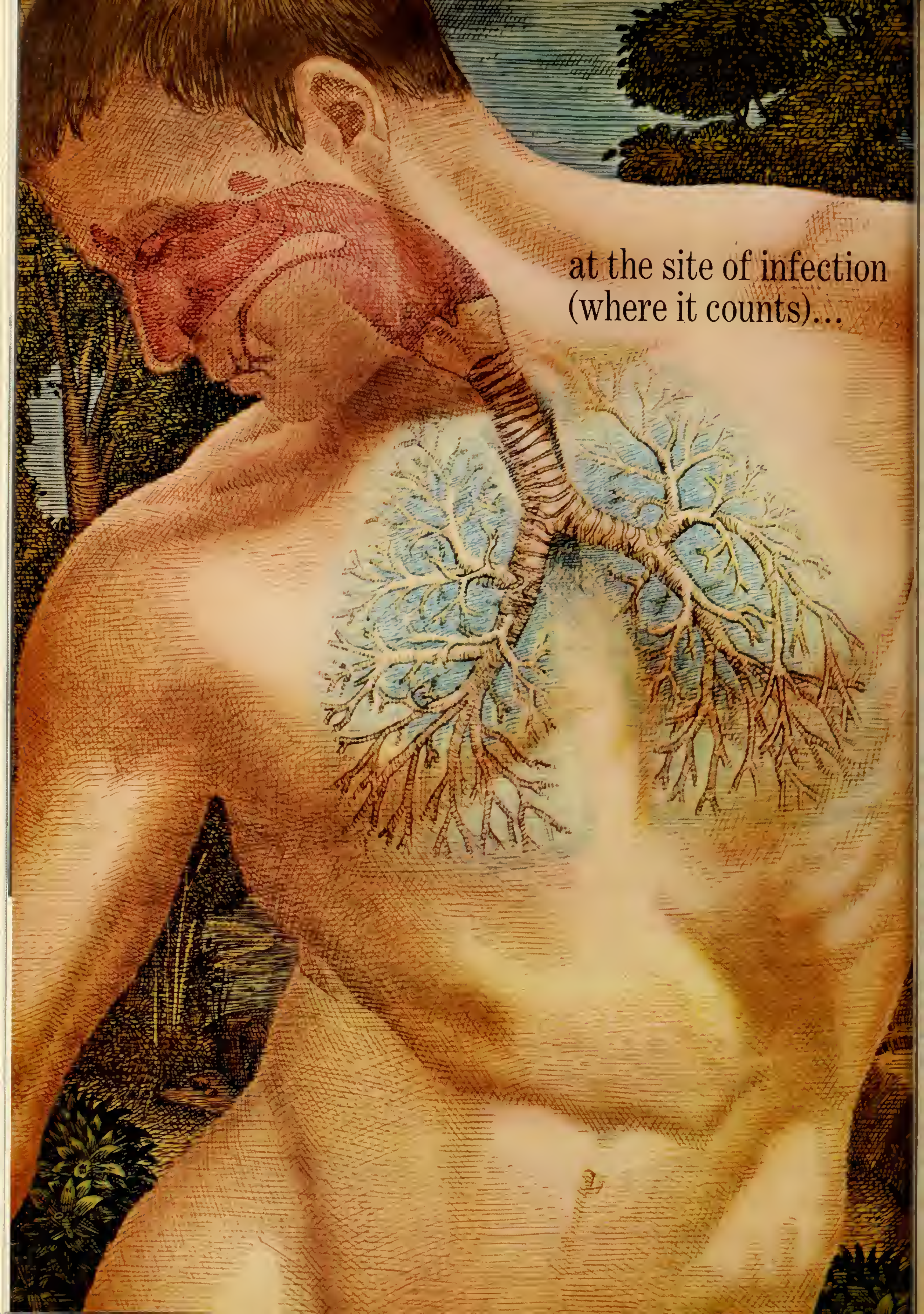
Under license from
Boehringer Ingelheim
G.m.b.H.

Geigy Pharmaceuticals
Division of
Geigy Chemical Corporation
Ardsley, New York

Dulcolax®
a gentle persuasion

D J-4809

Geigy


at the site of infection
(where it counts)...

Ilosone® provides more antibacterial activity than any other oral erythromycin

Acid stable, better absorbed... Ilosone produces faster, higher, more prolonged blood levels, even in the presence of food[1-3]

Because it is the most active form of oral erythromycin, Ilosone can help assure consistently greater antibacterial activity at the site of infection. Ilosone produces peak antibacterial blood levels two to four times those of other erythromycin preparations.[1,2] Not only are these levels attained earlier, but they are maintained for much longer periods. Even the presence of food does not seem to affect the activity of Ilosone.[1,3]

In the treatment of patients with bacterial infections susceptible to erythromycin, Ilosone has compiled an excellent therapeutic record. Since it exerts its greatest activity against gram-positive organisms, it is particularly useful in common respiratory and soft-tissue bacterial infections. Ilosone kills—not merely inhibits—streptococci, pneumococci, and more strains of staphylococci than any other macrolide antibiotic. This bactericidal action, coupled with the high antibacterial levels attained, makes Ilosone especially valuable in patients with low host resistance, such as infants, debilitated individuals, and diabetics.

Ilosone has shown no cross-resistance with penicillin and may be effective against organisms that have become resistant to that agent. Despite its high antibacterial activity, Ilosone has demonstrated a low incidence of side reactions. Blood dyscrasias, ototoxicity, and tooth staining have not been observed. Infrequent cases of drug idiosyncrasy, manifested by a cholestatic jaundice, have occurred, but there have been no known definite residual effects.

700121

Ilosone®
Erythromycin Estolate

Lilly

(See next page for prescribing information.)

Ilosone®/the most active oral form of erythromycin

Description: Ilosone is the most active form of oral erythromycin that has been developed. Because it is stable in acid, well absorbed, and excreted in lesser amounts in the bile, it provides faster, higher, and longer-lasting levels of antibacterial activity (ABA) in the serum, even when taken with food, than do comparable doses of erythromycin.

Indications: Ilosone is indicated in infections caused by microorganisms sensitive to its action (especially staphylococci, hemolytic streptococci, and pneumococci). The drug is therefore useful in a high proportion of bacterial diseases encountered in clinical practice and particularly in the treatment of bacterial infections of the upper and lower respiratory tract and soft tissues.

In the treatment of acute bacterial pharyngitis and tonsillitis, this antibiotic has promptly eradicated the bacteria (streptococci) and has produced a parallel prompt clinical improvement. There have been no group A beta-hemolytic streptococci resistant to this preparation. In beta-hemolytic streptococcus infections, treatment should be maintained for ten days to prevent the development of rheumatic fever or glomerulonephritis.

Erythromycin estolate has proved to be very effective in pneumococcus pneumonia and in acute bronchitis with pneumococci on culture. Bronchopneumonia and otitis media in children have responded well to its use.

The antibiotic has been used very successfully in staphylococcus infections. Good therapeutic results have been obtained in soft-tissue infections, abscesses, cellulitis, carbuncles, wound infections, and furunculosis.

In serious staphylococcus infections, erythromycin preparations should be used only in combination therapy with other antimicrobial agents. As is the case with any treatment regimen used in these severe conditions, surgical procedures should be performed when indicated, and large dosages of the antimicrobial agents should be employed. In this fashion, Ilosone has been effective in staphylococcus pneumonia, osteomyelitis, septicemia, empyema, and meningitis.

Multiple 500-mg. doses of the drug have been useful in gonorrhea and syphilis. Since penicillin is the drug of choice for the treatment of syphilis and gonorrhea, erythromycin estolate should be employed for these infections only in patients with a history of penicillin allergy. Also, other infections due to susceptible bacteria in patients known to be hypersensitive to penicillin or other antibiotics may be considered for treatment with Ilosone.

Contraindications: **Ilosone is contraindicated in patients with a known history of sensitivity to this drug and in those with preexisting liver disease or dysfunction.**

Side-Effects: Data obtained from seven years' use of propionyl erythromycin ester and erythromycin estolate (Ilosone) indicate that hepatic dysfunction with or without clinical jaundice may occur during or following courses of therapy with the drug.

Changes in liver function tests in such cases have been indicative of intrahepatic cholestasis. The symptoms appear to be the result of a form of sensitization. The initial symptoms have appeared in some cases after a few days of treatment but generally have followed one or two weeks of continuous therapy or several courses of the drug. Symptoms reappear promptly if the drug is readministered to sensitive patients, usually within forty-eight hours. Eosinophilia was noted in peripheral blood counts. The findings readily subsided without apparent residual effects when treatment was discontinued. Recovery was delayed in one reported instance. The physician indicated in this case that either drug-induced jaundice or viral hepatitis may have been responsible for the findings.

In one clinical study involving ninety-three patients treated with the antibiotic, three cases of jaundice were observed and an additional eleven cases developed some changes in liver function tests. Three of the patients had abnormal liver function tests a second time on readministration of the drug.

Even though it is assumed that not all cases of jaundice have been reported, it seems clear that the number is small compared with the amount of drug that has been used. Reported cases have included persons in whom there had been administered other drugs known to be associated at times with hepatic side-effects and cases in which the presence of viral hepatitis or other disease may have been responsible for the findings. In some of the cases, associated gastro-intestinal symptoms simulated the colic of biliary tract disease. In other instances, clinical symptoms and results of liver function tests resembled findings in extrahepatic obstructive jaundice. It appears that the occurrence of jaundice after administration of Ilosone is infrequent, but further investigations are being made to estimate its incidence more accurately.

In those cases mentioned above in which jaundice appeared to be definitely related to use of the drug, laboratory findings \ characterized by increased direct-reacting bilirubin, elev alkaline phosphatase levels, negative or weakly positive ceph flocculation and thymol turbidity tests, elevated serum glut oxalacetic transaminase levels, peripheral eosinophilia, and mal cholecystograms.

Individual idiosyncrasy seems evident since jaundice has been reported in other patients taking prolonged courses of medication. Patients with chronic infection have been given to 2 Gm. of the drug daily for periods of two to six months, patients with rheumatic fever have taken prophylactic dose 0.5 Gm. daily for two years without difficulty. In one grou 144 patients who received the drug daily for two years, no j dice was noted. It was of interest that members of six of t patients' families, who were not taking the drug, had epis of jaundice during the study period.

Transaminase and serum alkaline phosphatase levels \ determined in a group of fifty-four adults and children who 250 mg. of Ilosone daily for an average of sixteen month rheumatic fever prophylaxis. The results were compared \ those of a similar group of forty-four patients who received icillin. There were no cases of jaundice in either group. Eleva of SGPT and serum alkaline phosphatase levels during the co of treatment was observed in one patient treated with Ilo and in two patients treated with penicillin. Seven other pati in the group receiving Ilosone and four others in the penic group showed elevations in one of the tests at some time du administration of the drugs.

Very satisfactory therapeutic results, without toxicity, v reported in 102 pediatric patients who received short-term (day) courses of Ilosone in the treatment of streptococcus in tions. Results of liver function tests in these patients were c parable to those in a similar control group who had recei penicillin.

Gastro-intestinal disturbances not associated with hepatic fects are observed in a small proportion of individuals as a re of a local stimulating effect of the medication on the aliment tract; however, the normal intestinal gram-negative bacte flora is not appreciably altered by erythromycin drugs.

Although allergic manifestations are uncommon with the of erythromycin, there have been occasional reports of urtica skin eruptions, and, on rare occasions, anaphylaxis.

Administration and Dosage: Ilosone is administered orally.

Ilosone Pulvules®
Ilosone Chewable Tablets
Ilosone Drops
Ilosone, 125, for Oral Suspension

For infants and for children under twenty-five pounds of b weight, the usual dosage is 5 mg. per pound every six hours; children twenty-five to fifty pounds, 125 mg. every six ho (Tablets Ilosone Chewable should be chewed or crushed swallowed with water.)

For adults and for children over fifty pounds, the usual dos of Ilosone is 250 mg. every six hours.

For severe infections, these dosages may be doubled.

When larger doses are indicated, parenteral erythrom therapy should be considered.

In the treatment of syphilis, the recommended total dosag 20 to 30 Gm. given in divided doses for a period of ten to fift days. Close follow-up of the patient is necessary since eryt mycin drugs have not had adequate evaluation in all stage syphilis. Examinations of spinal fluid are recommended as p of the follow-up therapy.

For gonorrhea, 500 mg. four times a day for four days recommended. In the treatment of gonorrhea, patients wit suspected lesion of syphilis should have a dark-field examinat before receiving antibiotics, and monthly serologic tests sho be made for a period of three months.

How Supplied: Pulvules Ilosone, Capsules, N.F., 125 and 250 (equivalent to base), in bottles of 24 and 100.

Tablets Ilosone Chewable, N.F., 125 mg. (equivalent to bas in bottles of 50.

Ilosone Drops, 5 mg. (equivalent to base) per drop, in 10- size packages, with dropper calibrated at 25 and 50 mg.

Ilosone, 125, for Oral Suspension, N.F., 125 mg. (equival to base) per 5-cc. teaspoonful, in 60 and 150-cc.-size packag

References: 1. Griffith, R. S., and Black, H. R.: Am. J. M. Sc., *247*:69, 1
2. Griffith, R. S., and Black, H. R.: Antibiotics & Chemother., *12*:398, 1
3. Hirsch, H. A., Pryles, C. V., and Finland, M.: Am. J. M. Sc., *239*:198, 196

Additional information available to physicians upon request.
Eli Lilly and Company, Indianapolis, Indiana 46206.

what time is it?

For the past
two years
there's been
one new case
of active tuberculosis
reported for every
four thousand
of U.S. population.

it's time to tine.

Tuberculin,
Tine Test
(Rosenthal)
Lederle

Available in 5's and 25's.
Order now
from your pharmacist
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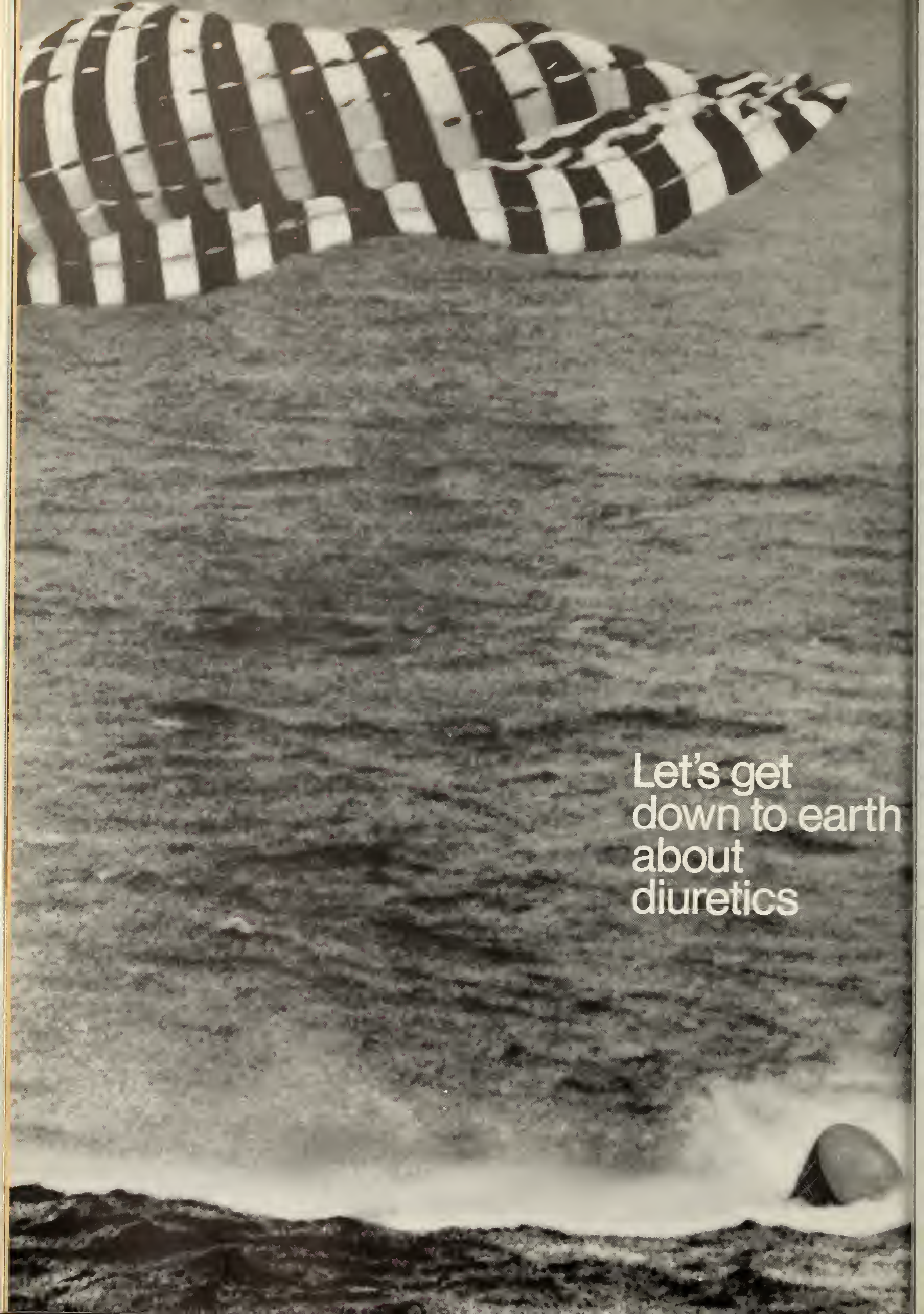

Let's get
down to earth
about
diuretics

With Hygroton, you'll discover that you can almost always use fewer tablets than is possible with other diuretics.

You may be told that a new short-acting diuretic was found more effective than Hygroton in congestive heart failure—but this was when twice the manufacturer's maximum recommended dose was given.* At the maximum recommended dose for both diuretics, two tablets of Hygroton were far and away more effective than five tablets of the other diuretic in producing natruresis and weight loss. And at these dosages, Hygroton costs only ⅓ as much as the other diuretic.

Since the discovery of chlorothiazide, the trend has been away from short-acting, multiple-dose, high-cost diuretics. With Hygroton you can usually do the job with just one tablet a day, or every other day.

More than any of the newer diuretics, Hygroton brings dosage and cost of medication down to earth.

*Brest, A. N., et al.:J. New Drugs 5:329, 1965.

Hygroton®
chlorthalidone

Indications: Hypertension and many types of edema involving retention of salt and water. **Contraindications:** Hypersensitivity and most cases of severe renal or hepatic disease. **Warning:** With administration of enteric-coated potassium supplements, the possibility of small bowel lesions should be kept in mind. **Precautions:** Reduce dosage of concomitant antihypertensive agents by at least one-half. Discontinue if the BUN rises or liver dysfunction is aggravated. Electrolyte imbalance and potassium depletion may occur; take special care in cirrhosis or severe ischemic heart disease, and in patients receiving corticosteroids, ACTH, or digitalis. Salt restriction is not recommended. **Side Effects:** Dizziness, weakness, nausea, vomiting, hyperglycemia, hyperuricemia, headache, muscle cramps, postural hypotension, constipation, leukopenia, thrombocytopenia, agranulocytosis, impotence, dysuria, transient myopia, skin reactions, including urticaria and purpura, epigastric pain, or G.I. symptoms after prolonged administration. **Average Dosage:** One tablet (100 mg.) with breakfast daily or every other day. **Availability:** Tablets of 100 mg. in bottles of 100 and 1000. For full details, see the complete prescribing information. 6524-V(B)

HY-4735

Geigy Pharmaceuticals
Division of Geigy Chemical Corporation, Ardsley, New York

Geigy

diet-rite® cola...

America's Number 1

Diet-Rite Cola is better tasting than old-time colas... or their low-calorie off-shoots. No sugar at all... less than 1 calorie per bottle... full cola taste. The pH of Diet-Rite, about 2.6 to 2.8, represents the same general range of acidity as other cola beverages and a number of fruit juices. Diet-Rite Cola is a soft drink you and your patients will like... and go on liking.

A Product of Royal Crown Cola Co.

"Yes, Doctor, the pain is gone."

■ Despite introduction of synthetic substitutes, efficacy of 'Empirin' Compound with Codeine remains unchallenged.

'Empirin'® Compound with Codeine Phosphate gr. ½ No. 3

Each tablet contains: Codeine Phosphate gr. ½ (Warning—May be habit forming), Phenacetin gr. 2½, Aspirin gr. 3½, Caffeine gr. ½.

Keeps the Promise of Pain Relief

BURROUGHS WELLCOME & CO. (U.S.A.) INC., Tuckahoe, N. Y.

It's easy
for children to get
otitis media...

and Gantanol Suspension is a good way to help them get well

proven effectiveness against major U.R.I. pathogens including beta-hemolytic strep

With Gantanol (sulfamethoxazole), bacteriologic conversion rates for beta-hemolytic streptococci are comparable to those generally seen with penicillin, and apparently superior to those cited in the literature for erythromycin and the broad-spectrum antibiotics.[1,2] With conversion rates ranging from a high of 96% in 229 patients[2] and 98% in 96 cases[3] to 65% in 105 cases,[5,6] Gantanol (sulfamethoxazole) Suspension is an effective alternative therapy in patients sensitive to penicillin, the drug of choice in known beta-hemolytic streptococcal infections.

In addition to this effectiveness against beta-hemolytic streptococci,[1-9] bacteriologic conversion rates have averaged 69% for *D. pneumoniae* (103 of 150 patients),[3,6,7] 78% for *H. influenzae* (42 of 54 patients),[3,4,7] and 67% for *Staph. aureus* (76 of 113 patients).[3,4,6,7] It is this wide spectrum of activity which makes Gantanol (sulfamethoxazole) Suspension a good choice in acute pharyngitis, tonsillitis and otitis media.

β-hemolytic strep

Staph. aureus

D. pneumoniae

H. influenzae

therapy generally uncomplicated by side effects

Over 8 out of 10 U.R.I. patients—87% of 2231 patients—showed an excellent to satisfactory clinical response to Gantanol (sulfamethoxazole).[1-13] Such favorable results are even more meaningful in view of the fact that only 1.1% of the more than 2000 cases cited discontinued therapy because of side effects. Of the total side effects reported (4.6%), most were mild and included rash, urticaria, itching, dizziness, headache, diarrhea, nausea and vomiting, shivering sensation, skin discoloration and crystalluria.[1-13]

Before prescribing, please consult complete product information, a summary of which follows:

Indications: Acute and chronic respiratory and urinary tract bacterial infections due to susceptible microorganisms. At present penicillin is considered the drug of choice in acute group A beta-hemolytic streptococcal infections; however, Gantanol (sulfamethoxazole) has shown an effectiveness approaching that of penicillin in a large number of patients. If employed in such infections, *it is important that therapy be continued in the usual recommended dosage for a period of at least 10 days.*

Contraindicated in sulfonamide-sensitive patients, pregnant females at term, premature infants or infants during first 3 months of life.

Warnings: Use only after critical appraisal in patients with liver damage, renal damage, urinary obstruction or blood dyscrasias. If toxic or hypersensitivity reactions or blood dyscrasias occur, discontinue therapy. In intermittent or prolonged therapy, blood counts and liver and kidney function tests should be performed. Data insufficient on prolonged or recurrent therapy in chronic renal diseases of children.

Precautions: Observe usual sulfonamide therapy precautions, including maintenance of an adequate fluid intake. Use with caution in patients with histories of allergies and/or asthma. Patients with impaired renal function should be followed closely since renal impairment may cause excessive drug accumulation. Occasional failures may occur due to resistant microorganisms. Not effective in virus or rickettsial infections.

Adverse Reactions: Following may occur: headache, nausea, vomiting, urticaria, diarrhea, hepatitis, pancreatitis, blood dyscrasias, neuropathy, drug fever, Stevens-Johnson syndrome, skin rash, injection of the conjunctiva and sclera, petechiae, purpura, hematuria and crystalluria.

Dosage: Children—1 teasp./20 lbs initially, followed by ½ teasp./20 lbs b.i.d. *Adults*—4 teasp. initially, followed by 2 teasp. b.i.d. or t.i.d., depending upon severity of infection.

How Supplied: Suspension 10%, 0.5 Gm sulfamethoxazole/5 cc teasp., cherry-flavored, bottles of 16 oz.

References: 1. Braden, B.; Colmore, J. P., and Cummings, M. M.: Antimicrobial Agents Annual—1960, p. 54. 2. Alban, J.: *Am. J. Dis. Child.*, *109*:304, 1965. 3. Elia, J. C.: *Eye Ear Nose & Throat Month.*, *41*:722, 1962. 4. Carter, C. H.: *Clin. Med.*, *71*:1571, 1964. 5. Jackson, H.; Cooper, J.; Mellinger, W. J., and Olsen, A. R.: *Southwestern Med.*, *44*:246, 1963. 6. Reichelderfer, T. E.: *Clin. Med.*, *71*:1045, 1964. 7. Peters, J. H.: Scientific Exhibit presented at the Spring Meeting of the American Academy of Pediatrics, April 26-29, 1965. 8. Peters, J. H.: Antimicrobial Agents and Chemotherapy—1961, p. 406. 9. Braden, B., and Colmore, J. P.: *J. Oklahoma M. A.*, *57*:7, 1964. 10. Chastain, P. J.: *J. Florida M. A.*, *48*:816, 1962. 11. Grater, W. C.: *Antibiotics & Chemother.*, *12*:450, 1962. 12. Exline, A. L.: *Colorado GP*, *5*:(5), 11, 1963. 13. Patton, J. M.: *West. Med.*, *5*:46, 1964.

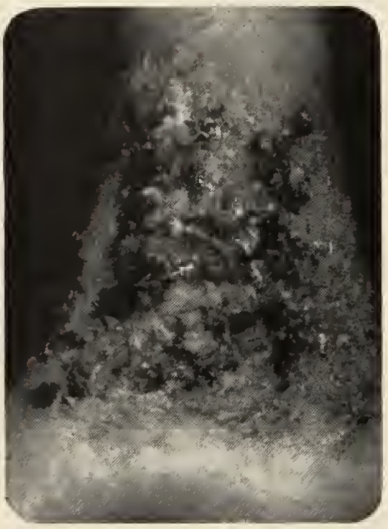
for optimal therapeutic response, remember the initial loading dose each time you prescribe Gantanol (sulfamethoxazole) Suspension

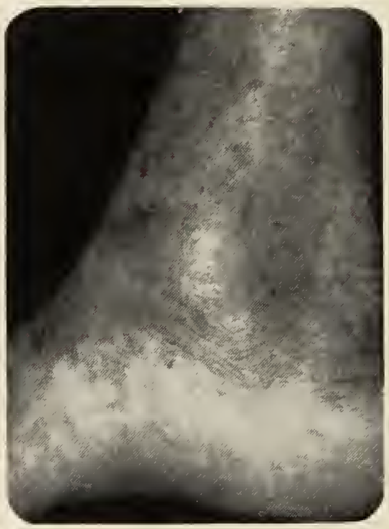
Gantanol®
(sulfamethoxazole)
Suspension

Roche Laboratories
Division of Hoffmann-La Roche Inc.
Nutley, New Jersey 07110

ROCHE

Eczema of many years... controlled in two weeks


Before treatment


After treatment —
with ARISTOCORT Topical
Ointment 0.1% for two weeks

ARISTOCORT® Triamcinolone Acetonide Topicals have proved exceptionally effective in the control of various forms of eczema: allergic, atopic, nummular, psoriatic, and mycotic.

In most cases responsive to topical ARISTOCORT, the 0.1% concentration is sufficiently potent. The 0.5% concentration provides enhanced topical activity for patients requiring additional potency for proper relief.

Administration and Dosage: Apply sparingly to the affected area 3 or 4 times daily. Some cases of psoriasis may be more effectively treated if the 0.1% Cream or Ointment is applied under an occlusive dressing.

Contraindications: Tuberculosis of the skin, herpes simplex, chicken pox and vaccinia.

Precautions and Side Effects: Do not use in the eyes or in the ear (if drum is perforated). A few individuals react unfavorably under certain conditions. If side effects are encountered, the drug should be discontinued and appropriate measures taken. Use on infected areas should be attended with caution and observation, bearing in mind the potential spreading of infection and the advisability of discontinuing therapy and/or initiating antibacterial measures. Generalized dermatological conditions may require systemic corticosteroid therapy. Steroid therapy, although responsible for remissions of dermatoses, especially of allergic origin cannot be expected to prevent recurrence. The use over extensive body areas, with or without occlusive nonpermeable dressings, may result in systemic absorption. Appropriate precautions should be taken. When occlusive nonpermeable dressings are used, miliaria, folliculitis and pyodermas will sometimes develop. Localized atrophy and striae have been reported with the use of steroids by the occlusive technique. When occlusive nonpermeable dressings are used, the physician should be aware of the hazards of suffocation and flammability. The safety of use on pregnant patients has not been firmly established. Thus, do not use in large amounts or for long periods of time on pregnant patients.

Available in 5 Gm. and 15 Gm. tubes and ½ lb. jars.

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Aristocort® Topical Ointment 0.1% and Cream 0.1%, 0.5%
Triamcinolone Acetonide
Also available in foam form.

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406-6

HIGHLAND HOSPITAL

ASHEVILLE, NORTH CAROLINA

Founded 1904

A Division Of The Department Of Psychiatry Of Duke University

Accredited by the Joint Commission on Accreditation and Certified for Medicare

Complete facilities for evaluation of and intensive treatment of psychiatric patients, including individual psychotherapy, group therapy, psychodrama, electro-convulsive therapy, Indoklon convulsive therapy, drugs, social service work with families, family therapy, and an extensive and well organized activities program, including occupational therapy, art therapy, athletic activities and games, recreational activities and outings. The treatment program of each patient is carefully supervised in order that the therapeutic needs of each patient may be realized.

Complete modern facilities with 85 acres of landscaped and wooded grounds in the City of Asheville.

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Charles W. Neville, Jr., M. D.
Assistant Professor of Psychiatry and Medical Director
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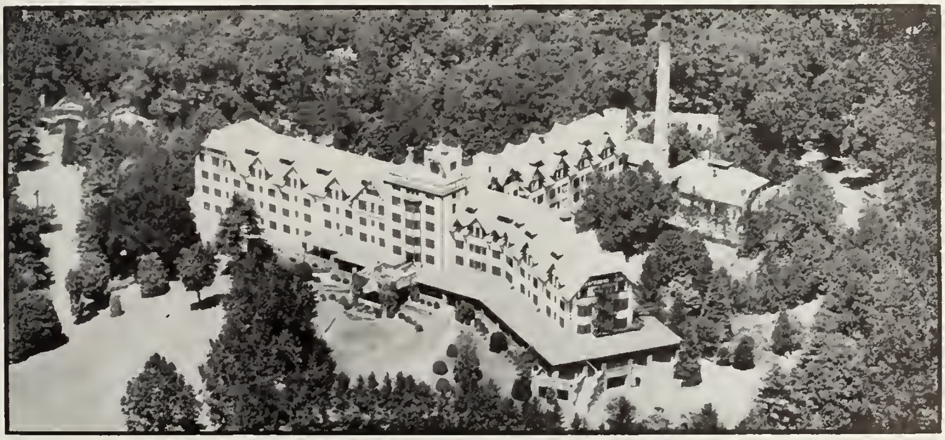
APPALACHIAN HALL

ESTABLISHED — 1916

ASHEVILLE NORTH CAROLINA



An Institution for the diagnosis and treatment of Psychiatric and Neurological illnesses, rest, convalescence, drug and alcohol habituation.

Insulin Coma, Electroshock and Psychotherapy are employed. The Institution is equipped with complete laboratory facilities including electroencephalography and X-Ray.

Appalachian Hall is located in Asheville, North Carolina, a resort town, which justly claims an all around climate for health and comfort. There are ample facilities for classification of patients, rooms single or en suite.

Wm. Ray Griffin, Jr., M. D.
Mark A. Griffin, Sr., M. D.
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APPALACHIAN HALL, ASHEVILLE, N. C.

When
thiazide
or
reserpine
alone
won't
keep

Establish and maintain early, more decisive control of blood pressure

DIUTENSEN®-R

Cryptenamine 1.0 mg.* Methyclothiazide 2.5 mg. Reserpine 0.1 mg.

When blood pressure won't stay down despite initial therapy—when complaints of headache, fatigue or dizziness are often voiced—it may be time for a change to Diutensen-R.

Diutensen-R is thiazide and reserpine *plus cryptenamine*—a rational, comprehensive therapy to help establish and maintain early, more decisive control of blood pressure.

The cryptenamine in Diutensen-R helps improve normal vasodilating reflexes while the thiazide and reserpine components maintain vasorelaxant, sedative, and saluretic benefits. Cryptenamine lowers pressoreceptor reflex thresholds (which may be abnormally high in hypertension)—"resets" pressoreceptors to function at more nearly normotensive levels.

Early, more decisive control with Diutensen-R helps secure continuing benefits—may reduce or even obviate the need for poorly tolerated drugs later in therapy.

"...quite apart from the problem of vascular damage, there arises a possibility of virtual 'cure' or remission of hypertension when treatment is early, i.e., before too many other secondary pressor systems have entered into the disequilibrium of pressor control, and when it is adequately suppressive."

Corcoran, A. C.: The choice of drugs in the treatment of hypertension. In: Drugs of Choice 1966-67, W. Modell, Ed., St. Louis, C. V. Mosby Company, 1966, p. 417.

Indications: Diutensen-R may be employed in all grades of essential hypertension. **Dosages:** Usual dose is 1 tablet twice daily, at morning and evening meals. However, adjustment of dosage to suit individual circumstances may be required. Please refer to package insert for full particulars. **Side effects and precautions:** The side effects observed with patients on Diutensen-R have been of a mild and nonlimiting nature. These include occasional urinary frequency, nocturia, nasal congestion, muscle cramps, skin rash, joint pains due to gout symptoms and nausea and dizziness which have been reported for the individual components. Most of these symptoms disappear while the drug is continued at the same or lower dosage level. The concomitant use of digitalis and Diutensen-R may increase the possibility of digitalis-like intoxication. If there is evidence of myocardial irritability (extrasystoles, bigeminy or AV block), dosage of Diutensen-R should be reduced or discontinued. Nocturia in patients with marginal cardiac status and salt and fluid retention can be effectively controlled by limiting the time of administration to early afternoon. Diutensen-R should not be used in patients with a known intolerance to reserpine. Package inserts furnish a complete summary of recommended cautions related to each of the ingredients of Diutensen-R.

*As tannate salts equivalent to 130 Carotid Sinus Reflex Units.

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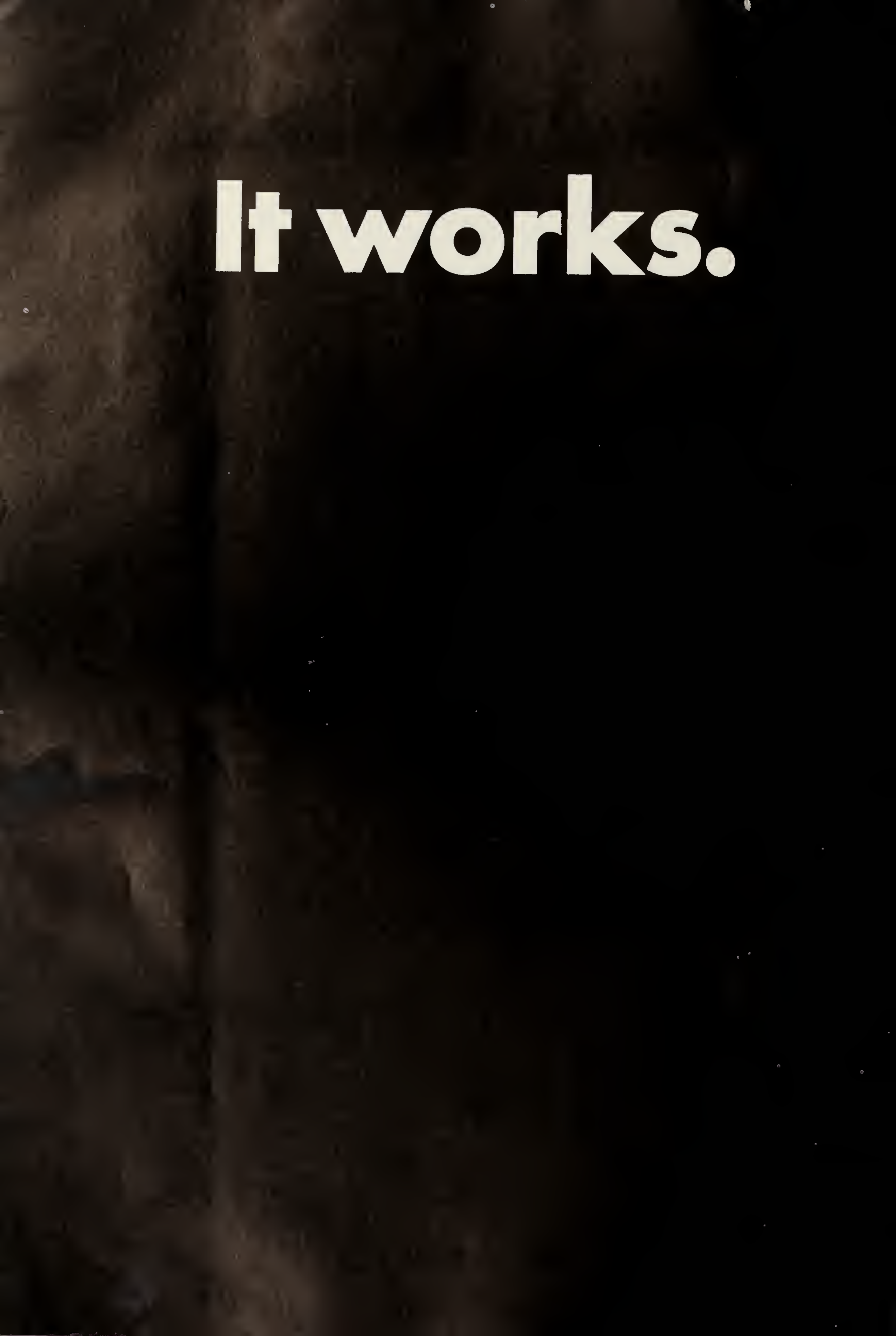
It works.

SUMMARY:

TREST® (METHIXENE HYDROCHLORIDE)

relieves G.I. spasm, hyperactivity and associated pain by directly antagonizing the parasympathetic nervous system.

Each tablet contains methixene hydrochloride, 1 mg.

INDICATIONS: Gastrointestinal Spasm and Hypermotility.

CONTRAINDICATIONS: Pyloric obstruction, gastric retention, obstructive organic disease of the gastrointestinal tract, organic cardiospasm, duodenal stenosis, stenosing peptic ulcer, and urinary bladder neck obstruction or prostatic hypertrophy are contraindications to the use of this drug.

WARNING: Overdosage produces anticholinergic side effects. Although the animal reproduction studies are negative, until there is clinical confirmation of safety in pregnancy, this product should not be used in women who may become pregnant unless in the opinion of the physician the benefits outweigh the risks.

PRECAUTIONS: Use only with caution in patients with certain types of cardiovascular disease, since anticholinergic drugs may cause arrhythmias. Extensive clinical studies of TREST have shown no evidence of glaucoma. However, the possibility exists that it can occur since it has been reported as a characteristic side effect of anticholinergic drugs. This product does not replace definitive treatment in organic gastrointestinal disease.

SIDE EFFECTS: Side effects are generally absent when TREST is used in the recommended dosage of 1 to 2 mg. three times daily. Uncommonly, allergy or sensitivity to the drug may be manifested by generalized rash or widespread desquamation. In case of prolonged or massive overdosage, dry mouth, blurred vision, and urinary retention, typical side effects common to anticholinergic drugs, may occur. Occasionally, sensitive patients may notice mild dryness of mouth or slight blurring of vision from doses of 2 mg. or more. Most patients tolerate single doses of 5 mg. without such side effects.

DOSAGE: The usual adult dosage is 1 mg. by mouth three times daily. If necessary, the dose may be increased to 2 mg. three times daily. Pediatric dosage has not been determined.

CAUTION: Federal law prohibits dispensing without prescription.

Puts the G.I. tract to rest

DORSEY LABORATORIES • *a division of The Wonder Company* • Lincoln, Nebraska

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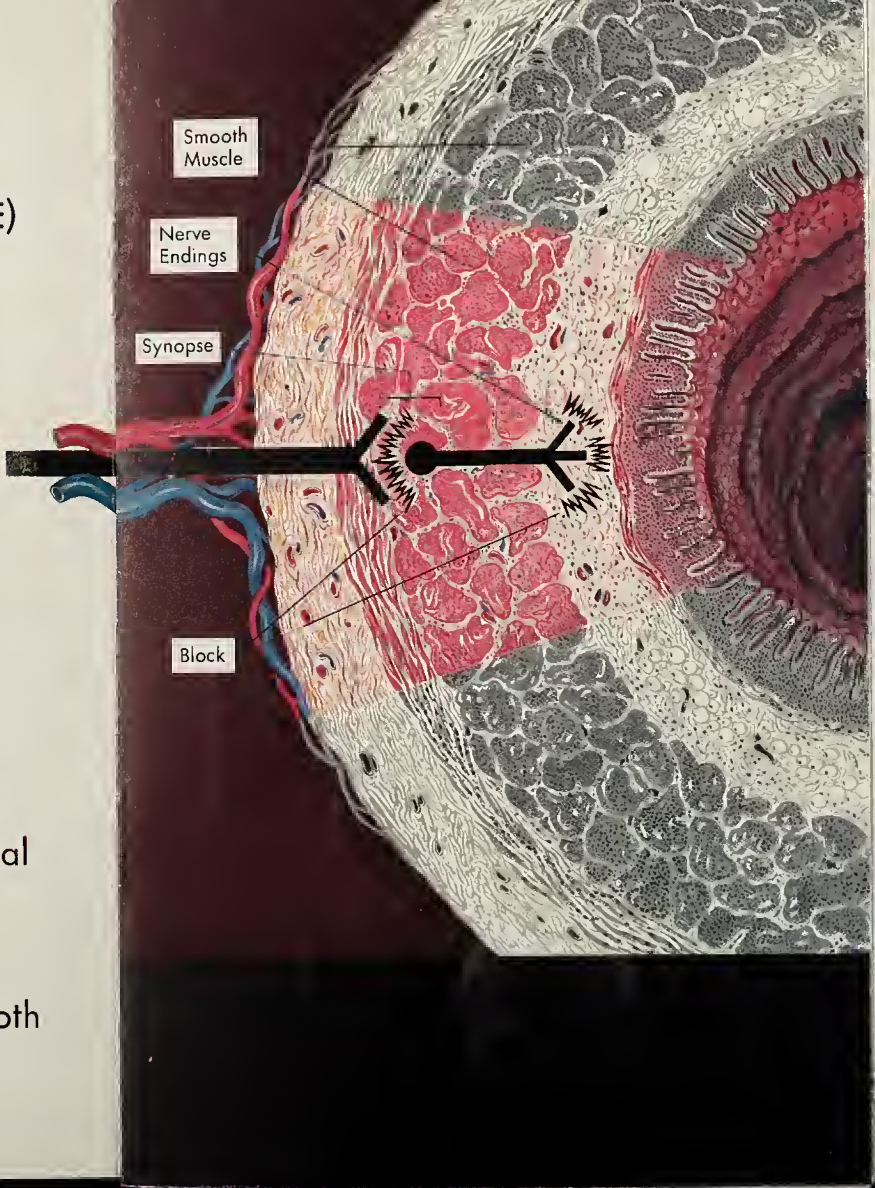
An antispasmodic that antagonizes.

How TREST®
(METHIXENE HYDROCHLORIDE)
works.

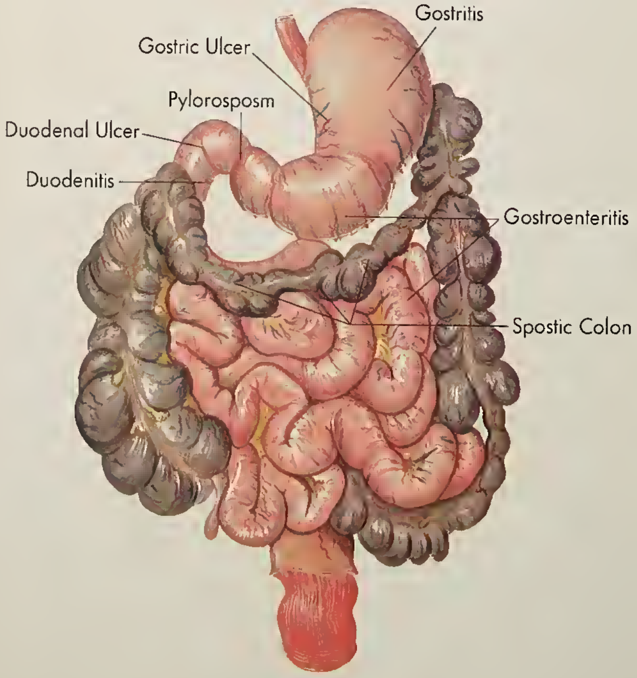


TREST (methixene hydrochloride) directly antagonizes the parasympathetic nervous system.

TREST (methixene hydrochloride) blocks the action of acetylcholine formed at the synapses and visceral parasympathetic nerve endings.

Therefore, nerve impulses are prevented from reaching the smooth muscle layer.

TREST® (METHIXENE HYDROCHLORIDE) relieves gastrointestinal spasm, hyperactivity and associated pain in:



Put the gut to rest with your prescription for TREST®

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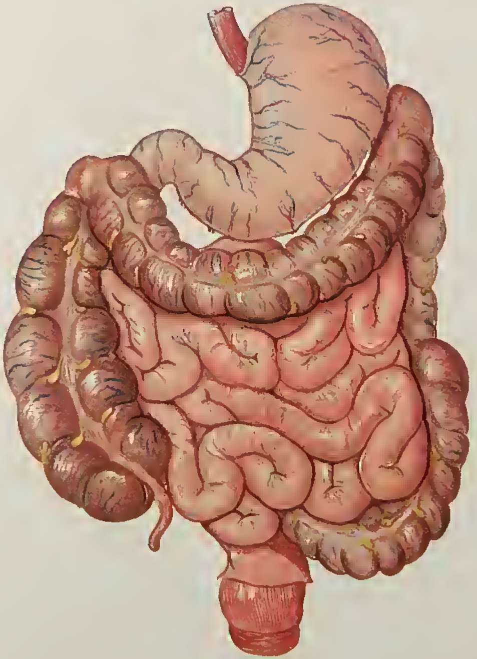


Evidence that TREST®
(METHIXENE HYDROCHLORIDE)
# works.

EFFECTIVENESS AND SAFETY

t.i.d. dosage in milligrams

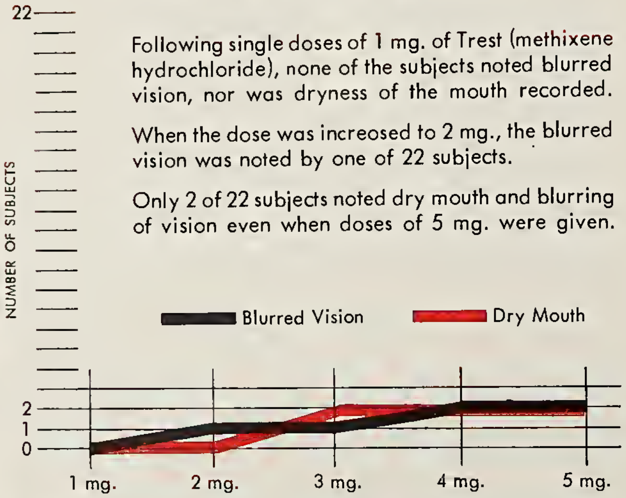
1 mg. symptomatic relief

2 mg. upper recommended clinical dose/greater pharmacologic activity and symptomatic relief/side effects uncommon

10 mg.

Studies with 372 subjects revealed no adverse effect upon vital organs when dosage was increased 10 times the normally effective dose of 1 mg. t.i.d. for periods up to 2½ years of continued administration.

LACK OF SIDE EFFECTS



Following single doses of 1 mg. of Trest (methixene hydrochloride), none of the subjects noted blurred vision, nor was dryness of the mouth recorded.

When the dose was increased to 2 mg., the blurred vision was noted by one of 22 subjects.

Only 2 of 22 subjects noted dry mouth and blurring of vision even when doses of 5 mg. were given.

Conclusion: Typical atropine-like side effects are not expected when Trest is used 1 mg. t.i.d. These effects are uncommon when the dosage is increased to 2 mg. t.i.d.

"A highly satisfactory symptomatic response was obtained in 20 of the 23 patients who took 1 mg. of methixene hydrochloride (Trest) by mouth three times daily. No side effects occurred at this dosage during administration of the medication itself.

"Methixene hydrochloride (Trest) provides highly gratifying symptomatic relief in a variety of conditions associated with gastrointestinal motility without producing the usual atropine-like side effects and without requiring concurrent barbiturate sedation."

—Martins, J. K.:
Clin. Med. *72*:1313-1316
(Aug.) 1965.

". . . in a series of 47 patients suffering from various types of functional bowel distress. The superiority of this drug (Trest) in dosage of 1.0 mg. three times daily by mouth over the placebo is statistically significant. At that dosage level, side effects were not observed."

—Hufford, A. R.:
Clin. Med. *72*:1151-1155
(July) 1965.

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Before prescribing, please consult complete product information, a summary of which follows:

Contraindications: Patients with known hypersensitivity to the drug.

Warnings: Caution patients about possible combined effects with alcohol and other CNS depressants. Warn against hazardous occupations requiring complete mental alertness. Use caution in administering to addiction-prone patients or those who might increase dosage; withdrawal symptoms (including convulsions), following discontinuation of the drug and similar to those seen with barbiturates, have been reported. Use of any drug in pregnancy, lactation, or in women of child-bearing age requires that its potential benefits be weighed against its possible hazards.

Precautions: In elderly and debilitated and in children over five, limit dosage to smallest effective amount, increasing gradually as needed and tolerated. In general, concomitant use with other psychotropics is not recommended. Paradoxical reactions have been reported in psychiatric patients and hyperactive aggressive children. Variable effects on blood coagulation have been reported very rarely in patients receiving the drug and oral anticoagulants; causal relationship has not been established clinically. Observe usual precautions in presence of impaired renal or hepatic function, impending depression and suicidal tendencies.

Adverse reactions: Drowsiness, ataxia and confusion may occur, especially in elderly and debilitated. These are reversible in most instances by proper dosage adjustment, but are also occasionally observed at the lower dosage ranges. Syncope occurs rarely. Also encountered are isolated instances of skin eruptions, edema, minor menstrual irregularities, nausea and constipation, extrapyramidal symptoms, increased and decreased libido—all infrequent and generally controlled with dosage reduction; changes in EEG patterns (low-voltage fast activity) may appear during and after treatment; blood dyscrasias (including agranulocytosis, jaundice and hepatic dysfunction) may develop occasionally, making periodic blood counts and liver-function tests advisable during protracted therapy. Individual maintenance dosages should be determined.

Dosage: Oral—Adults: Mild to moderate anxiety and tension, 5 or 10 mg t.i.d. or q.i.d.; severe states, 20 or 25 mg t.i.d. or q.i.d. Geriatric patients: 5 mg b.i.d. to q.i.d.

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Medical Schooling

Leukemia

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The views expressed in this publication are those of the writers and do not necessarily reflect the opinions of the South Carolina Medical Association.

Contributions of Original Articles

Length—short articles of about 2,500 words (about 8 typewritten pages, double spaced) are preferred. Longer articles ordinarily will defer to the shorter ones in schedule of publication.

Manuscripts—Manuscripts should be typewritten, double spaced, and the original and a carbon copy submitted.

Illustrations—Ordinarily publication of 4 small illustrations or the equivalent accompanying an article will be paid for by The Journal. Any number beyond this must be paid for by the author except under unusual conditions. Illustrations should be sent as glossy prints or graphs in black ink with lettering large enough to show after reduction.

References—Should conform to the following order: surname and initials of author, title of article in small letters, name of periodical, with volume, page, month, day of the month if weekly, and year—e.g.: Lee, G. S.: The heart rhythm following therapy with digitalis, Arch Int Med 44:554, Dec. 1942. They should be listed numerically in order of appearance in the text. Standard abbreviation for journals should be used. Note that periods are not used with these abbreviations as indicated by the Index Medicus. Other abbreviations should also be standard—e. g. mg, ml, Gm.

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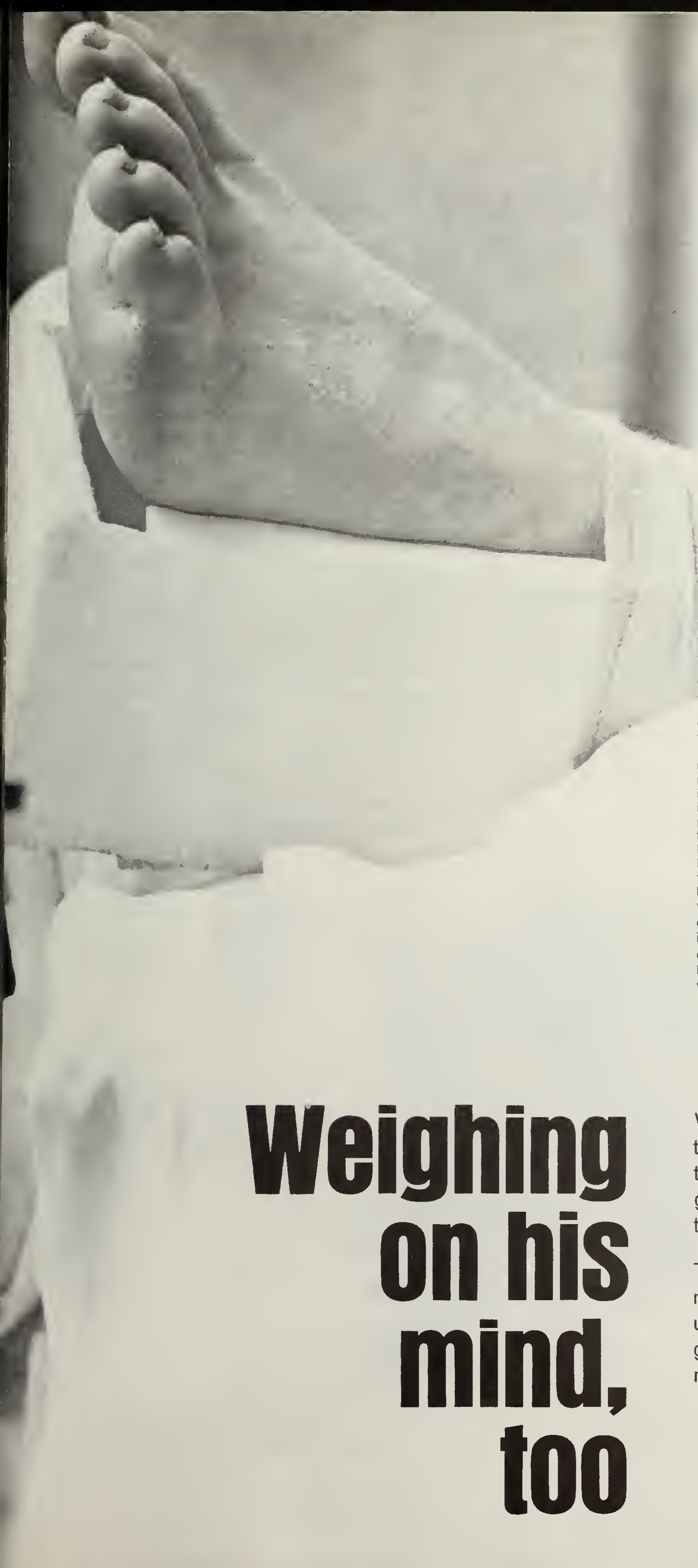

TABLETS

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Precautions: Keep out of reach of children. Carefully supervise dose and amounts prescribed, especially for patients prone to overdose themselves. Excessive prolonged use of meprobamate may result in dependence or habituation in susceptible persons—as ex-addicts, alcoholics, severe psychoneurotics. Withdraw gradually after prolonged high dosage to avoid possibly severe withdrawal reactions including epileptiform seizures. Warn patients of possible reduced alcohol tolerance. If drowsiness, ataxia or visual disturbances occur, reduce dose. If symptoms persist, caution patients against operating machinery or driving. Give cautiously to patients with suicidal tendencies. Treat attempted suicide with immediate gastric lavage and appropriate supportive therapy

Side Effects: Ethoheptazine and aspirin may occasionally cause nausea, vomiting, epigastric distress, and rarely dizziness and CNS depression. Overdosage may result in salicylate intoxication. Meprobamate rarely causes allergic or idiosyncratic reactions. These reactions, sometimes severe, can develop in patients receiving only 1 to 4 doses who have had no previous contact with meprobamate. Mild reactions are characterized by urticarial or erythematous maculopapular rash. Acute nonthrombocytopenic purpura with petechiae, ecchymoses, peripheral edema and fever have been reported. Meprobamate should be stopped and not reinstituted. Severe reactions, observed very rarely, include angioedema, bronchial spasms, fever, fainting spells, hypotensive crises (1 fatal case), anaphylaxis, stomatitis and proctitis (1 case) and hyperthermia. A few cases of leukopenia, usually transient, have been reported following prolonged dosage. Rarely, cases of aplastic anemia (1 fatal case), thrombocytopenic purpura, agranulocytosis, and hemolytic anemia have been reported; almost always, in the presence of known toxic agents.

Contraindications: History of sensitivity or severe intolerance to aspirin or meprobamate.

Composition: 150 mg. meprobamate, 75 mg. ethoheptazine citrate and 250 mg. aspirin per tablet.

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When pain evokes anxiety and tension, thereby heightening patient discomfort, a simple analgesic may only touch on part of the problem.

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inhibition of ovulation by means of 2 time-proved hormonal agents

production of a cervical mucus hostile to sperm motility and vitality

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no unplanned pregnancies

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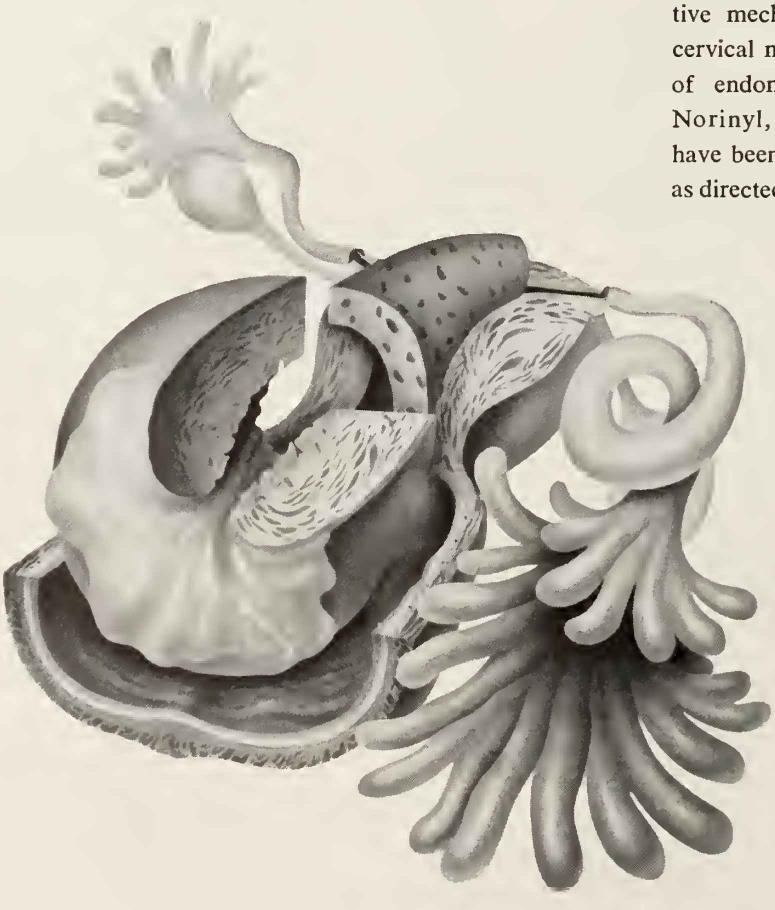

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Low incidence of BTB and spotting, nausea and amenorrhea tends to minimize side effect problems and increases patient cooperation.

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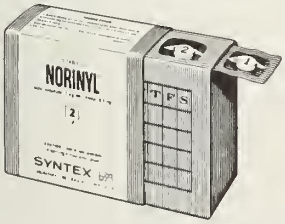
An unbreakable "confusionproof" package makes it easy to adhere to prescribed dosage schedule: individually sealed tablets numbered from 1 through 20 *plus* monthly calendar record enables patient to double-check dosage intake by day and corresponding tablet number.



Contraindications: Thrombophlebitis or pulmonary embolism (current or past). Existing evidence does not support a causal relationship between use of Norinyl and development of thromboembolism. While a study which was conducted does not resolve definitively the possible etiologic relationship between progestational agents and intravascular clotting, it tends to confirm the findings of the Ad Hoc Advisory Committee appointed by the Food and Drug Administration to review this possibility. Cardiac, renal or hepatic dysfunction. Carcinoma of the breast or genital tract. Patients with a history of psychic depression should be carefully studied and the drug discontinued if depression recurs to marked degree. Patients with a history of cerebral vascular accident.
Warning: Discontinue medication pending examination if there is sudden partial or complete loss of vision, or if there is a sudden onset of proptosis, diplopia or migraine. If examination reveals papilledema or retinal vascular lesions, medication should be withdrawn.
Precautions: By May 1963, experience with norethindrone 2 mg.—mestranol 0.1 mg. had extended over 24 months. Through miscalculation, omission or error in taking the recommended dosage of Norinyl, pregnancy may result. If regular menses fail to appear and treatment schedule has not been adhered to, or if patient misses two menstrual periods, possibility of pregnancy should be resolved before resuming Norinyl. If pregnancy is established, Norinyl should be discontinued during period of gestation since virilization of the female fetus has been reported with oral use of progestational agents or estrogen. When lactation is desired, withhold Norinyl until nursing needs are established. Existing uterine fibroids may increase in size. In metabolic or endocrine disorders, careful clinical preevaluation is indicated. A few patients without evidence of hyperthyroidism had elevated serum protein-bound iodine levels, which in the light of present knowledge, does not necessarily imply hyperthyroidism. Protein-bound iodine increased following estrogen administration. Bromsulphalein retention has occurred in up to 25% of patients without evidence of hepatic dysfunction. Studies from 24-hour urine collections have shown an increase in aldosterone and 17-ketosteroids and decrease in 17-hydroxycorticoid levels. Thus, Norinyl should be discontinued prior to and during thyroid, liver or adrenal function tests. Because progestational agents may cause fluid retention, conditions such as epilepsy, migraine and asthma require careful observation. Thus far no deleterious effect on pituitary, ovarian or adrenal function has been noted; however, long-range possible effect on these and other organs must await more prolonged observation. Norinyl should be used with caution in patients with bone, renal or any disease involving calcium or phosphorus metabolism.
Side Effects: Intermenstrual bleeding; amenorrhea; symptoms resembling early pregnancy, such as nausea, breast engorgement or enlargement, chloasma and minor degree of fluid retention (if these should occur and patient has not strictly adhered to medication plan, she should be tested for pregnancy); weight gain; subjective complaints such as headache, dizziness, nervousness, irritability; in a few patients libido was increased. In a total of 3,090 patients, 2.2% discontinued medication because of nausea.
NOTE: See sections on contraindications and precautions for possible side effects on other organ systems.
Dosage and Administration: One Norinyl tablet orally for 20 days, commencing on day 5 through and including day 24 of the menstrual cycle. (Day 1 is the first day of menstrual bleeding.)
Availability: Dispensers of 20 and 60 tablets; bottles of 100.

References: 1 Council on Drugs. JAMA 187 664 (Feb. 29) 1964. **2.** Bryans, F. E.: Canad Med Ass J 92:287 (Feb. 6) 1965. **3.** Goldzieher, J. W.: Med Clin N Amer 48:529 (Mar.) 1964 **4.** Cohen, M. R.: Paper presented at Symposium on Low-Dosage Oral Contraception, Palo Alto, Calif., July 15, 1965. Reported in Med Sci 16:26 (Nov.) 1965. **5.** Hammond, D. O.: Ibid. **6.** Rice-Wray, E., Goldzieher, J. W., and Aranda-Rosell, A.: Fertil Steril 14:402 (Jul.-Aug.) 1963 **7.** Goldzieher, J. W., Moses, L. E., and Ellis, L. T.: JAMA 180:359 (May 5) 1962 **8.** Kempers, R. D.: GP 29:88 (Jan.) 1964. **9.** Tyler, E. T.: JAMA 187:562 (Feb. 22) 1964. **10.** Rudel, H. W., Martinez-Manautou, J., and Maqueo-Topete, M: Fertil Steril 16:158 (Mar.-Apr.) 1965. **11.** Flowers, C. E., Jr: N Carolina Med J 25:139 (Apr.) 1964. **12.** Goldzieher, J. W.: Appl Ther 6:503 (June) 1964. **13.** The Control of Fertility. Report adopted by the Committee on Human Reproduction of the American Medical Association JAMA 194:462 (Oct. 25) 1965. **14.** Flowers, C. E., Jr.: JAMA 188:1115 (June 29) 1964. **15.** Merritt, R. I.: Appl Ther 6:427 (May) 1964. **16.** Newland, D. O.: Paper presented at Symposium on Low-Dosage Oral Contraception, Palo Alto, Calif., July 15, 1965. Reported in Med Sci 16:26 (Nov.) 1965.

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Recommended intake: Adults, 1 capsule daily, for the treatment of vitamin deficiencies. Supplied in decorative "reminder" jars of 30 and 100; bottles of 500.

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Contraindicated: In glaucoma, pyloric or duodenal obstruction, stenosing peptic ulcers, prostatic hypertrophy or obstruction at the bladder neck, achalasia and myasthenia gravis.

References: 1. McHardy, G. G., Judice, R. C., McHardy, R. J., and Cradic, H.: Southern Med. J. *59*:459 (April) 1966. 2. Slanger, A.: Western Med. *6*:205, 1965.

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Indications: Menopausal syndrome and female hypogonadism.
Contraindications: Patients with tumors which estrogen might stimulate.
Precautions: Examine patients for mammary or reproductive system neoplasm. Give with great care, if at all, to patients who have precancerous lesions or family history of cancer.

Prolonged administration or high doses may produce anterior pituitary suppression. Endometrial bleeding can usually be avoided by cyclic administration at lowest effective dose and addition of progesterone during last half of cycle. Endometrial hyperplasia may develop in spite of cyclic therapy.
Side Effects: Occasional gastrointestinal disturbances, headache and vertigo. These usually disappear following proper dosage reduction.
Dosage and Administration: Determine minimum effective dose and maintain only as long as necessary.

Menopausal Syndrome: One or two tablets (0.02 or 0.04 mg.) daily. Omit therapy one week each month. Repeat cyclic therapy until satisfactory response is obtained. Advise patient that vaginal bleeding may occur.

Female Hypogonadism: Two tablets (0.04 mg.) one to three times daily for two weeks followed by progesterone for two weeks. Continue cyclic therapy for 3-6 months; then withdraw therapy to determine if normal cycle will be instituted. Additional cyclic therapy may be required in some patients.

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SIDE EFFECTS: Occasional local reactions: rebound congestion, slight burning or stinging, sneezing, dry nose. Occasional systemic effects: headache, drowsiness, lightheadedness, insomnia, palpitations. Overdosage in young children may produce profound sedation. DOSAGE: **Adults:** *Nasal Solution*—2 or 3 drops in each nostril every 4 to 6 hours. *Nasal Spray*—Squeeze rapidly once or twice in each nostril every 4 to 6 hours. **Children under 12:** *Pediatric Nasal Solution*—2 or 3 drops in each nostril every 4 to 6 hours. One drop should be used in infants under 6 months. *Pediatric Nasal Spray*—Squeeze rapidly once in each nostril holding tube upright; repeat every 4 hours as necessary. SUPPLIED: OTRIVIN® hydrochloride (xylometazoline hydrochloride CIBA) *Nasal Solution,* 0.1%; dropper bottles of 1 fluidounce, bottles of 1 pint. *Nasal Spray,* 0.1%; plastic squeeze tubes of 15 ml. *Pediatric Nasal Solution,* 0.05%; dropper bottles of 1 fluidounce. *Pediatric Nasal Spray,* 0.05%; plastic squeeze tubes of 15 ml. *Nasal Solutions* contain either 0.1% or 0.05% xylometazoline hydrochloride, triethanolamine, hydrochloric acid, sodium chloride, and phenylmercuric acetate 1:50,000 as preservative in water. *Nasal Sprays* contain either 0.1% or 0.05% xylometazoline hydrochloride, potassium phosphate monobasic, potassium chloride, sodium phosphate dibasic, sodium chloride, and benzalkonium chloride 1:5000 as preservative in water. *Consult complete literature before prescribing.*

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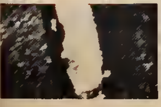
Although in bacteriologically proven streptococcal infections penicillin remains the drug of choice, Gantanol (sulfamethoxazole) has shown conversion rates comparable to those generally seen with penicillin and apparently superior to those cited in the literature for erythromycin and broad-spectrum antibiotics.[1,2] Conversion rates have ranged from a high of 96 per cent in 229 patients[2] to a low of 65 per cent in 105 cases.[3,4] When Gantanol (sulfamethoxazole) Suspension is used in group A beta-hemolytic streptococcal infections, it is important to continue therapy in the recommended dosage for at least 10 days. In addition, Gantanol (sulfamethoxazole) Suspension has demonstrated antibacterial activity against *D. pneumoniae, H. influenzae* and *Staph. aureus.* Thus Gantanol (sulfamethoxazole) Suspension may be considered a practical choice for common bacterial U.R.I., as well as an effective alternative in the penicillin-sensitive patient with proven beta-hemolytic streptococcal infection.

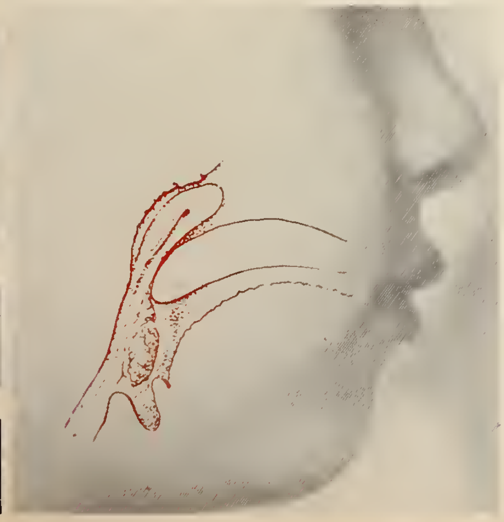
β-hemolytic strep

Staph. aureus

D. pneumoniae

H. influenzae





therapy generally uncomplicated by side effects

Such favorable results as those cited in the literature[1-12] are even more meaningful in view of the fact that only 27 of 1961 patients (1.4%) discontinued therapy because of side effects. Of the total side effects reported in 107 patients (5.5%), most were mild and included rash, urticaria, itching, dizziness, headache, diarrhea, nausea and vomiting, shivering sensation, skin discoloration and crystalluria.[1-12]

Before prescribing, please consult complete product information, a summary of which follows:

Indications: Acute and chronic respiratory and urinary tract bacterial infections due to susceptible microorganisms. At present penicillin is considered the drug of choice in acute group A beta-hemolytic streptococcal infections; however, Gantanol (sulfamethoxazole) has shown an effectiveness approaching that of penicillin in a large number of patients. If employed in such infections, *it is important that therapy be continued in the usual recommended dosage for a period of at least 10 days.*

Contraindicated in sulfonamide-sensitive patients, pregnant females at term, premature infants or infants during first 3 months of life.

Warnings: Use only after critical appraisal in patients with liver damage, renal damage, urinary obstruction or blood dyscrasias. If toxic or hypersensitivity reactions or blood dyscrasias occur, discontinue therapy. In intermittent or prolonged therapy, blood counts and liver and kidney function tests should be performed. Data insufficient on prolonged or recurrent therapy in chronic renal diseases of children.

Precautions: Observe usual sulfonamide therapy precautions, including maintenance of an adequate fluid intake. Use with caution in patients with histories of allergies and/or asthma. Patients with impaired renal function should be followed closely since renal impairment may cause excessive drug accumulation. Occasional failures may occur due to resistant microorganisms. Not effective in virus or rickettsial infections.

Adverse Reactions: Following may occur: headache, nausea, vomiting, urticaria, diarrhea, hepatitis, pancreatitis, blood dyscrasias, neuropathy, drug fever, Stevens-Johnson syndrome, skin rash, injection of the conjunctiva and sclera, petechiae, purpura, hematuria and crystalluria.

Dosage: Children—1 teasp./20 lbs initially, followed by ½ teasp./20 lbs b.i.d. *Adults*—4 teasp. initially, followed by 2 teasp. b.i.d. or t.i.d., depending upon severity of infection.

How Supplied: Suspension 10%, 0.5 Gm sulfamethoxazole/5 cc teasp., cherry-flavored, bottles of 16 oz.

References: 1. Braden, B., and Colmore, J. P.: *J. Oklahoma M.A., 57*:7, 1964. 2. Alban, J.: *Am. J. Dis. Child., 109*:304, 1965. 3. Reichelderfer, T. E.: *Clin. Med., 71*:1045, 1964. 4. Jackson, H.; Cooper, J.; Mellinger, W. J., and Olsen, A. R.: *Southwestern Med., 44*:246, 1963. 5. Braden, B.; Colmore, J. P., and Cummings, M. M.: Antimicrobial Agents Annual—1960, p. 54. 6. Peters, J. H.: Data adapted from a Scientific Exhibit presented at the Spring Meeting of the American Academy of Pediatrics, April 26-29, 1965. 7. Peters, J. H.: Antimicrobial Agents and Chemotherapy—1961, p. 406. 8. Elia, J. C.: *Eye Ear Nose & Throat Month., 41*:722, 1962. 9. Patton, J. M.: *West. Med., 5*:46, 1964. 10. Chastain, P. J.: *J. Florida M.A., 48*:816, 1962. 11. Grater, W. C.: *Antibiotics & Chemother., 12*:450, 1962. 12. Exline, A. L.: *Colorado GP, 5*:(5),11, 1963.

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*Marks, V., and Dawson, A.: Brit. M. J. *1*:293, 1965.

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Contraindications: Contraindicated in individuals who have shown hypersensitivity to any of its components. Not recommended for prophylaxis or in the management of infectious processes which may require more than 10 days of continuous therapy. If clinical judgement dictates therapy for longer periods, serial monitoring of liver function is recommended. Not recommended for subjects who have shown abnormal liver function tests, or hepatotoxic reactions to triacetyloleandomycin.
Precautions and Adverse Reactions: Triacetyloleandomycin, administered to adults in daily oral doses of 1.0 gm. for 10 or more days, may produce hepatic dysfunction and jaundice. Adults requiring 3 gm. of Signemycin initially should have liver function followed carefully and the dosage should be reduced as promptly as possible to the usual recommended range of 1.0 to 2.0 gm. per day. Present clinical experience indicates that the observed changes in liver function are reversible after discontinuation of the drug.
Use with caution in lower than usual doses in cases with renal impairment to avoid accumulation of tetracycline and possible liver toxicity. If therapy is prolonged under such circumstances, tetracycline serum levels may be advisable. In long term therapy or with intensive treatment or in known or suspected renal dysfunction, periodic laboratory evaluation of the hematopoietic, renal and hepatic systems should be done. Formation of an apparently harmless calcium complex with tetracycline in any bone forming tissue may occur. Use of tetracycline during tooth development (3rd trimester of pregnancy, infancy and early childhood) may cause discoloration of the teeth. Reversible increased intracranial pressure due to an unknown mechanism has been observed occasionally in infants receiving tetracycline. Glossitis, stomatitis, proctitis, nausea, diarrhea, vaginitis and definite allergic reactions occur rarely. Severe anaphylactoid reactions have been reported as due to triacetyloleandomycin. Photosensitivity and photoallergic reactions (due to the tetracycline) occur rarely. Medication should be discontinued when evidence of significant adverse side effects or reaction is present. Patients should be carefully observed for evidence of overgrowth of nonsusceptible organisms including fungi, which occurs occasionally, and which indicates this drug should be discontinued and appropriate therapy instituted. Steps should be taken to avoid masking syphilis when treating gonorrhea.

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The Journal
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VOLUME 63 February, 1967 NUMBER 2

NEW DRUGS IN THE MANAGEMENT OF ACUTE LEUKEMIA, 1964-1966

JOHN R. SAMPEY, Ph. D.
Furman University, Greenville, South Carolina

George Bernard Shaw's dictum that "Activity is the only road to knowledge" finds further fulfillment in the 25 reports on the clinical management of the acute leukemias which have been released since a 1965 review of the writer. Methylglyoxal- bisguanylhydrazine (Methyl-GAG) gave a 49% remission rate when administered to 41 patients with acute leukemia (Bernard, Levin, Mathe), which compares with a 48% rate calculated from 215 cases in earlier surveys (Sampey).

Sulfur drugs occupy a prominent place in the current control of acute leukemia. Brubaker and associates reported complete remissions in 52% of 252 children given thioguanine, and 46% complete remissions in those receiving thioguanosine. Bichel employed buthiopurine to induce 19 complete remissions in 34 children, but he noted only one complete remission in nine adults; Malaskova recorded 50% remissions (30% complete) in ten patients on this 6-MP derivative. Silva Sosa noted three complete remissions in 15 children receiving Imuran, another 6-MP derivative.

Fluorometholone caused 42 complete remissions, 18 good partial remissions, 6 fair partial remissions and 7 minimum responses in 75 children who received adequate doses of the drug (Hartmann). Cytosine arabinoside had a 43% overall remission rate in 67 patients of all ages who were given the drug (Bernard, Howard).

Injections of a crystallized fraction of the spleen (Industin) induced a 48% remission rate in 40 patients with acute leukemia. (Gerlich). Trenimon, betamethasone, methylhydrazine and chloroquinone are other drugs which have been given current trials as antileukemic agents.

A list of 26 references may be obtained from the author.

PULMONARY COMPLICATIONS IN SURGICAL PATIENTS

A REVIEW[1]

NORMAN COOPER, M. D.[*]
WILLIAM H. LEE, JR., M. D.[**]

Perhaps too frequently ventilatory problems are regarded solely as the concern of the anesthesiologist or thoracic surgeon. Recently, at a conference in Boston,[1] Gaensler stated that at the Boston City Hospital, out of 7,000 referrals for pulmonary function studies, only 14 came from general surgeons and none at all from anesthesiologists. Most "routine" pre-operative studies are performed largely to uncover unsuspected disorder with a view toward preventing complications which might possibly arise from them. The frequency with which routine blood studies, electrocardiograms, and renal function tests uncover clinically unsuspected disease of sufficient import as to alter the planning or conduct of surgery, or even lead to cancellation, is well known. The treatment of choice for any complication includes early recognition and prophylaxis whenever possible. The application of this concept to pulmonary disease is self evident.

The incidence of respiratory complications in general surgical patients, particularly those undergoing abdominal surgery, is greater than that of all other complications combined. It is also well known that pulmonary impairment is by far the most common contraindication

The Incidence of Post-operative Complications in 1500 Patients

TYPES OF OPERATIONS	1914	1924	1934	1944	1954	Total
	# (%)	# (%)	# (%)	# (%)	# (%)	# (%)
Inguinal Hernia	85 7 1	35 18 0	35 25.7	46 26.1	45 31.1	246 19.1
Acute Appendicitis	86 3 5	92 23 9	76 18.4	55 14.5	26 11.5	335 14.9
Chronic Appendicitis	26 —	21 23 8	34 23 5	15 6.7	15 6.1	111 13.5
Laparatomy	10 60 0	27 55.6	37 21.6	27 40 7	28 31.2	129 39.5
Upper Various Abdominal	23 13.0	29 37.9	23 56.5	26 50.0	26 53.8	127 42 5
Stomach	9 33.3	46 67.4	31 51.6	22 68.2	38 71.1	146 63.0
Perforated Peptic Ulcer	2 50.0	5 80 0	4 50.0	4 50.0	5 80 0	20 65.0
Acute Intestinal Obstruction	16 18.8	10 40.0	10 60.0	11 63.6	6 33.3	53 41.5
Kidney	12 —	14 21.4	8 —	12 —	13 46.5	59 15.3
Bladder and Prostate	9 11.1	7 —	13 30.8	34 29.4	31 77.4	94 15.3
Perineum	8 —	10 —	13 15 4	22 4.5	26 7.7	79 6.3
Gynaecalagical	14 7.1	4 —	16 12.5	26 7.7	41 14.8	101 8.9

1914 – 1917

TABLE I. CONDENSED FROM ANSCOMBE: PULMONARY COMPLICATIONS IN ABDOMINAL SURGERY. YEARBOOK PUBLICATION. CHICAGO. 1957.

TABLE I.

Depicts the incidence of pulmonary complications in 1500 patients from 1914-1954. Note the high incidence with upper abdominal procedures as compared to perineal operations.

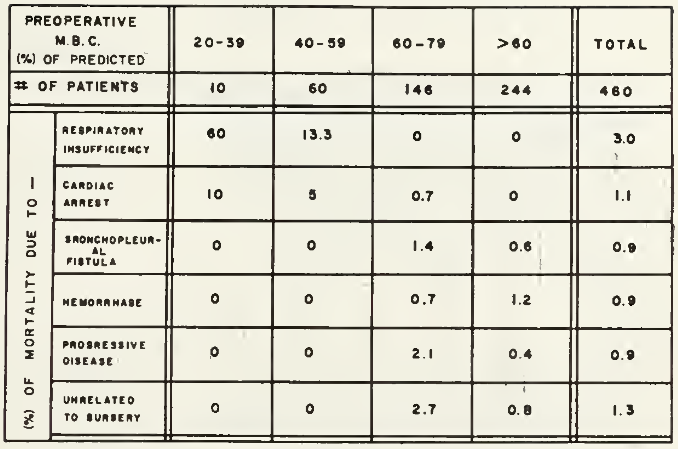
Condensed from Anscombe.

---

[*] Research Fellow, Thoracic and Cardiovascular Surgery (Supported by PHS Training Grant # HE 5337-08).

[**] Associate Professor of Surgery and Chief, Division of Thoracic Surgery.

[1] From the Division of Thoracic Surgery, Medical College of South Carolina, Charleston, South Carolina.



PREOPERATIVE M.B.C. (%) OF PREDICTED		20-39	40-59	60-79	>60	TOTAL
# OF PATIENTS		10	60	146	244	460
(%) OF MORTALITY DUE TO –	RESPIRATORY INSUFFICIENCY	60	13.3	0	0	3.0
	CARDIAC ARREST	10	5	0.7	0	1.1
	BRONCHOPLEURAL FISTULA	0	0	1.4	0.6	0.9
	HEMORRHAGE	0	0	0.7	1.2	0.9
	PROGRESSIVE DISEASE	0	0	2.1	0.4	0.9
	UNRELATED TO SURGERY	0	0	2.7	0.8	1.3

TABLE II. MORTALITY FROM PULMONARY AND CHEST WALL SURGERY

from E.A. GAENSLER INTERNATIONAL ANAESTHESIOLOGY CLINICS
FEB. 3, 1965

TABLE II.

Shows the correlation between pre-operative pulmonary reserve and patient mortality in 460 patients studied at Boston City Hospital. Note the high correlation rates for decreased pulmonary reserve with respiratory insufficiency and cardiac arrest.
From Gaensler.

---

to thoracic and cardiovascular surgery today, and is certainly the most important cause of operative and post-operative mortality. Table I describes the incidence of post-operative pulmonary complications at the London Hospital from 1914 to 1954.[2] Note that surgery on the upper abdomen alone accounts for a complication rate of greater than 50%, and that intraperitoneal procedures are fraught with more than twice the complication rate as compared to extraperitoneal procedures. Similar observations have been reported by other authors.[3, 4] Realization that these rates of complications have not significantly changed for the past 40 years[5] should stimulate the surgeon to review periodically the status of this set of problems.

Table II depicts the mortality rate in 460 patients who underwent pulmonary or chest wall surgery at the Boston City Hospital. From this study[6] it is seen that respiratory insufficiency was the most common cause of death and that its incidence is intimately related to pre-operative pulmonary reserve. Another cause showing this relationship was cardiac arrest. Figure I correlates the degree of pre-operative reserve with post-operative disability in the same 460 patients. Patients with no disability or slight disability were gainfully employed one or more years post-operatively. Those with moderate disability could work part-time or were rehabilitated for sedentary occupations. Those with severe disability were unable to work at all, and those totally disabled were largely unable to care for themselves. The increasing discrepancy between the vital capacity and the maximal breathing capacity suggests that the patients in the categories on the right had increasing degrees of obstructive disease.[6] It is generally agreed that in obstructive disease, the maximal breathing capacity will be affected far in excess of the vital capacity, which remains largely unchanged: whereas in restrictive disease, the major change is seen in the vital capacity. It is agreed, too, that approximately 90% of the complications generally encountered will be due to obstructive disease.[1, 7]

Realizing that the patient with the highest

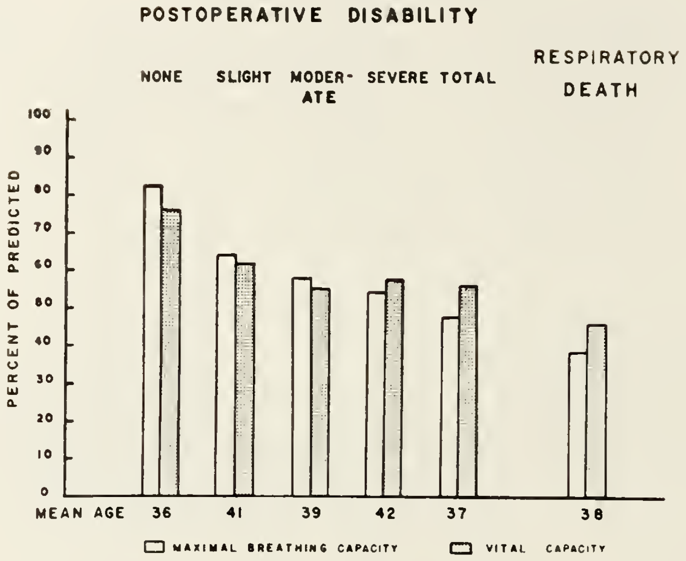


FIGURE I.

Demonstrates the degree of post-operative disability in 460 patients undergoing chest wall or pulmonary surgery at Boston City Hospital. Note that the loss of maximal breathing capacity in excess of that of vital capacity would indicate that the patients in the last three categories were afflicted with varying degrees of obstructive disease.

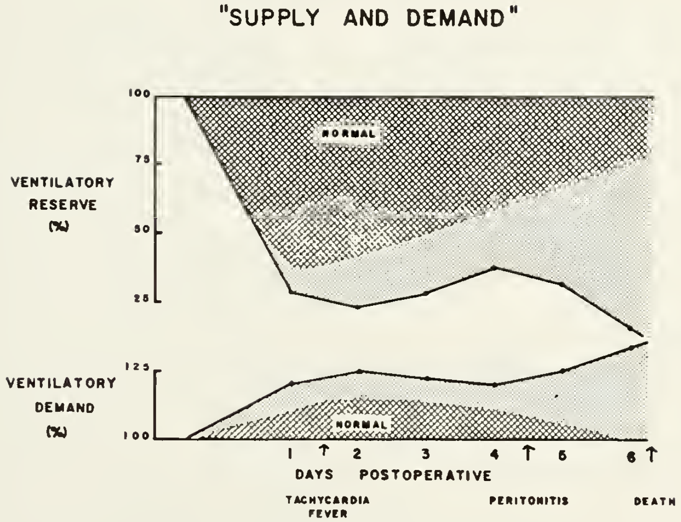
From Gaensler, Journal of Thoracic Surgery, February, 1955.

probability for developing post-operative pulmonary complications will display some manifestation of impaired pulmonary function or chronic lung disease pre-operatively, the surgeon may be alerted to recognize, evaluate, and apply prophylactic care for such patients by a careful search for the following factors:

1. A history of shortness of breath, wheezing, cough, sputum production, or any other symptom of cardiopulmonary disease.
2. A history of previous thoracic surgery.
3. Physical findings of rales, expiratory wheezing, rhonchi, hyperresonance, distant breath sounds, clubbing, cyanosis, or shortness of breath with tachycardia from mild to moderate exercise, or laboratory findings of polycythemia or of cyanosis.
4. Evidence of emphysema or other thoracic pathology in the routine pre-operative chest x-ray film.

Thus, from simple clinical evaluation of the patient and routine pre-operative laboratory studies, the majority of patients who may experience post-operative pulmonary complications may be recognized. Such patients represent the "high risk group" for post-operative pulmonary complications. Stein found a 70% incidence of pulmonary complications in 30 patients with abnormal pre-operative pulmonary functions, but only 30% in 33 patients without these abnormalities.[8] The value of pulmonary function studies performed pre-operatively in this high risk group should then become clear. An important addition to this group should be male smokers who are to undergo thoracic or upper abdominal surgery.[9]

Figure IIa combines the work of Anscombe,[2] who in the upper area depicts the extensive reduction in ventilatory reserve (vital capacity and maximum air flow) following subtotal gastrectomy, with the work of Kinney[10] below, who shows the increase in basal ventilatory demand. Kinney found, as he puts it, according to the law of supply and demand, the crisis which occurs when a post-



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Shows the loss of respiratory reserve (above) and the increase of ventilatory demand (below) leading to respiratory insufficiency when peritonitis complicates a sub-total gastrectomy.
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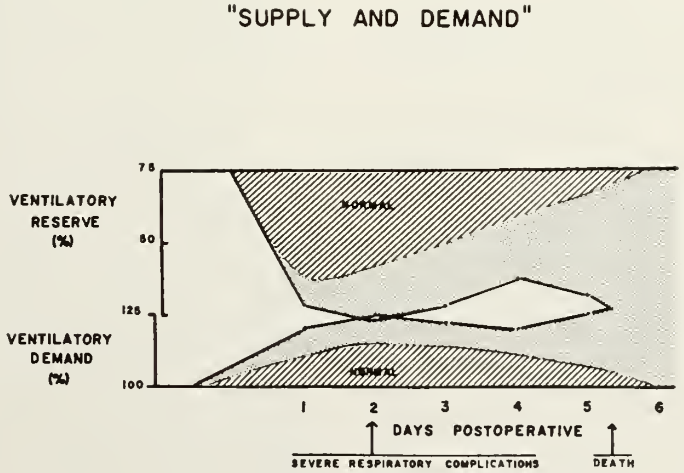
operative complication such as peritonitis appears, simultaneously reduces ventilatory reserve while increasing the tissue demand for ventilation. Often these combine to produce a lethal deficit. It becomes obvious that the margin of reserve would be lost even sooner if the patient came to operation with a ventilatory reserve of 70 to 80%, rather than the 100% depicted in Figure IIb.

Armed, then, with a quantitative description of pulmonary reserve, the surgeon is better able to forecast the likelihood and perhaps even the type of post-operative complications to expect. Thus, many cases may undergo



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operation with the surgeon prepared to cope with the possibility of complications, rather than necessary procedures being postponed on the grounds of an intuitive evaluation of pulmonary insufficiency.

Pulmonary complications, then, must be considered from at least three points of view: the pre-operative, operative, and post-operative aspects.

Pre-Operative Considerations

This area should include at least the following six categories:

1. Recumbency: Various authors have reported a 4 to 11.6% reduction of the vital capacity due to;
   a) raising of the diaphragm by abdominal viscera.[11]
   b) pulmonary venous congestion.[12]
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   c) Ravdin and Kern expressed the thought that woman's somewhat scanty clothing tends to harden her against respiratory infections.[16]
3. Age.
4. Pre-existing respiratory disease.
5. The influence of heart disease and circulatory failure. Surgery in patients with heart failure can lead to a critical diminution of an already decreased vital capacity. Here, time is well spent in measures designed to decrease pulmonary congestion pre-operatively.[2]
6. Morton[9] found a six fold increase in complication rates in smokers who used one half pack of cigarettes or one half ounce of tobacco daily. The smoker should abstain completely for at least several weeks before elective operation.

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Thoracic procedures exhibit the most marked immediate effect upon respiration even if no lung tissue is removed. The most important variable here is the degree of pre-operative contribution to function of the lung on the side of operation. Naturally, pneumonectomy would produce little functional change if the lung to be resected had already been totally destroyed by disease, whereas, even exploration may exert a profound effect if the lung on that side was responsible for the majority of total lung function.[17]

Anscombe[2] investigated pulmonary function daily in 146 patients in an effort to assess the value of one type of incision as opposed to another. He studied vital capacity, maximum inspiratory rate, and maximum expiratory rate, and came to the following conclusions:

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Rovenstine and Taylor[18] found that procedures lasting more than two hours were associated with three times the incidence of chest complications as compared with operations lasting one hour or less; further, those lasting more than three hours were associated with a 31% incidence of chest complications. There is still ample reward for skill and brevity in the conduct of operative procedures.

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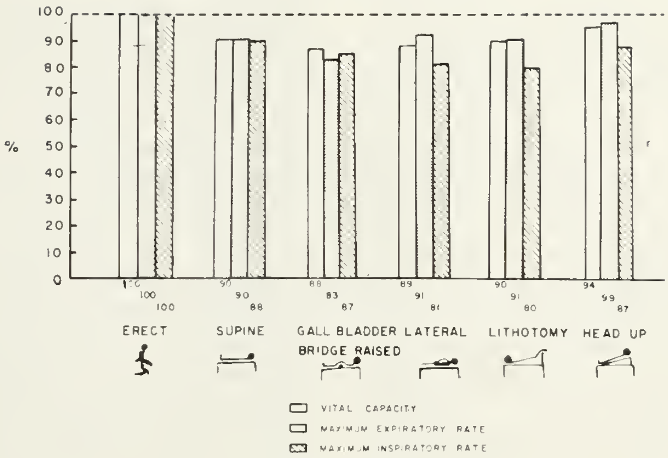

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Demonstrates the effect of various table positions on the vital capacity: Maximum inspiratory rate and maximum expiratory rate. The differences between table positions are not significant.

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them. Analyses of large series of patients reveal that the anesthetic and the method of administration have little effect on the incidence of pulmonary complications.[19, 20] In most series reported, spinal and local anesthesia show a slightly increased incidence of chest complications, due largely to heavy premedication and the use of these techniques in very poor risk patients.[21]

Post-Operative Considerations

One of the most important post-operative considerations is pain, which affects pulmonary function in three ways:

1. Pain may produce bronchospasm.
2. It induces reluctance to cough.
3. It inhibits mobility of the patient. Many investigators have tried numerous methods to relieve post-operative pain, from continuous irrigation with procaine[22] to peridural and epidural blocks.[23] However, due to technical difficulties and the complexities of the various methods, morphine or similar opiates still remain the most common drugs used to combat operative pain. Controversy still rages over the potential undesirable side effects of depressing the respiratory center and inhibition of the cough reflex, with many authors stating that these seriously outweigh the analgesia produced.[24] However, Davis[25] showed that arterial oxygen saturation rose in patients with lobar pneumonia who received small doses every 4 to 6 hours, while those with more widespread inflammation exhibited a dangerous degree of hypoxia when morphine was used. Overholt[26] found in 1930 that 10 mg of morphine caused a slight reduction in the vital capacity of normal subjects, but also caused a 20% increase in the vital capacity of post-operative subjects. Anscombe[2] investigated 10 post-operative patients who received 10-15 mg of morphine and found a 16% increase in vital capacity with a 20% increase in the maximal inspiratory rate. When these patients were restudied 24 hours later without further benefit of morphine administration, a reduction of these figures was found.

The surgical dressing may also produce problems. The influence of binders on the incidence of post-operative pulmonary complications has long been recognized. When applied correctly, they limit the movement of the lower ribs and abdomen and raise the diaphragm as well, resulting in a 20% decrease of total lung volume, each compartment being equally inhibited.[27] In 1966 the need for continuous use of the binder has been removed by the Intensive Care Unit, where for the purposes of coughing the nurse may quickly and temporarily splint the abdomnial wall by tightly wrapping a sheet about the patient and encouraging him to cough, after which the sheet is removed and the patient's ventilation is not restricted. The same criticisms applied to binders apply to any heavy tape circular dressing albeit to somewhat lesser degrees. Anscombe[2] recommends a narrow Elastoplast dressing over several layers of gauze. Although abdominal distension is reputed to interfere with respiration, there is no convincing objective evidence to support this premise.[28]

These thoughts tend to focus attention upon the recognition and handling of complications as they occur. The maintenance of careful pre-operative bronchial toilet, using postural drainage, breathing exercises, expectorants, and the cessation of smoking at least two weeks pre-operatively (even if it requires earlier hospitalization of patients), will significantly reduce later pulmonary complications in the high risk groups. Pulmonary insufficiency is effectively overcome during the actual operation by mechanical respiratory assistance following intubation. The most reliable method the anesthesiologist has for estimating his effectiveness in this regard is periodic checks on the blood gases and pH during the procedure. However, clinical evaluation of skin color, venous blood color, blood pressure, pulse, and pupils will provide useful warning of impending ventilatory decompensation. The operative functional losses then are largely those of the critical first few hours in the recovery room and to some extent the first two to three weeks after surgery, and are usually due to reduction in the ability to ventilate due to pain, spasm, medication, or in the case of thoracic procedures, some degree of pneumohemothorax.

One of the most important early post-operative considerations is that of hydration, since dehydration leads quickly to increased viscosity of the bronchial secretions.[29] This, plus the well known fact that irritant anesthetic gases cause a significant increase in the amount of bronchial secretions, and the loss of ciliary action as a result of intubation when combined with reflex bronchospasm, are important in the production of post-operative atelectasis. This problem must be carefully anticipated and recognized. Its onset is abrupt—usually within 48 hours of surgery with rapid rise in temperature, pulse, and respiratory rates. There are decreased breath sounds with or without dyspnea. A portable chest film may be obtained to confirm suspicion. Once diagnosed, treatment should be immediate and aggressive. If well conditioned pre-operatively, deep-breathing exercises, sitting, and coughing with the aid of clapping percussion to the chest, will usually give excellent results.[4] Postural drainage is usually not feasible in the post-operative patient, but the importance of "deep" coughing cannot be overemphasized. Some English authors even recommend sniffing ammonia to induce a bout of coughing. Trans-tracheal instillation of a few drops of water or saline will produce the same effect. If it has been necessary to keep the patient "dry," the secretions quickly become inspissated and cough will be ineffective. This may be overcome by the use of intermittent positive pressure breathing and frequent or constant nebulization to keep inspired air at 90-100% humidity. If the desired results are not quickly obtained in this way, one of the various mucolytic agents will be helpful as adjuncts to nebulization: a) N-acetyl cysteine (Mucomist) for stringy viscous sputum—2 ml, 20%, q2h; b) Dornavac for purulent sputum—25-50 thousand U. q4h; c) Tergemist, a wetting agent to permeate more distally into the bronchial tree, or a combination of these agents.

Wheezing is a sign of bronchospasm and should be counteracted upon recognition. This can be accomplished on a short-acting basis by nebulization with Isuprel, or by injection of Bronchephrin, or ephedrine, and may be supplemented with longer acting agents such

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NEW DRUGS IN THE MANAGEMENT OF ACUTE LEUKEMIA, 1964-1966

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Furman University, Greenville, South Carolina

George Bernard Shaw's dictum that "Activity is the only road to knowledge" finds further fulfillment in the 25 reports on the clinical management of the acute leukemias which have been released since a 1965 review of the writer. Methylglyoxal- bisguanylhydrazine (Methyl-GAG) gave a 49% remission rate when administered to 41 patients with acute leukemia (Bernard, Levin, Mathe), which compares with a 48% rate calculated from 215 cases in earlier surveys (Sampey).

Sulfur drugs occupy a prominent place in the current control of acute leukemia. Brubaker and associates reported complete remissions in 52% of 252 children given thioguanine, and 46% complete remissions in those receiving thioguanosine. Bichel employed buthiopurine to induce 19 complete remissions in 34 children, but he noted only one complete remission in nine adults; Malaskova recorded 50% remissions (30% complete) in ten patients on this 6-MP derivative. Silva Sosa noted three complete remissions in 15 children receiving Imuran, another 6-MP derivative.

Fluorometholone caused 42 complete remissions, 18 good partial remissions, 6 fair partial remissions and 7 minimum responses in 75 children who received adequate doses of the drug (Hartmann). Cytosine arabinoside had a 43% overall remission rate in 67 patients of all ages who were given the drug (Bernard, Howard).

Injections of a crystallized fraction of the spleen (Industin) induced a 48% remission rate in 40 patients with acute leukemia. (Gerlich). Trenimon, betamethasone, methylhydrazine and chloroquinone are other drugs which have been given current trials as antileukemic agents.

A list of 26 references may be obtained from the author.

PULMONARY COMPLICATIONS IN SURGICAL PATIENTS

A REVIEW[1]

NORMAN COOPER, M. D.*
WILLIAM H. LEE, JR., M. D.**

Perhaps too frequently ventilatory problems are regarded solely as the concern of the anesthesiologist or thoracic surgeon. Recently, at a conference in Boston,[1] Gaensler stated that at the Boston City Hospital, out of 7,000 referrals for pulmonary function studies, only 14 came from general surgeons and none at all from anesthesiologists. Most "routine" pre-operative studies are performed largely to uncover unsuspected disorder with a view toward preventing complications which might possibly arise from them. The frequency with which routine blood studies, electrocardiograms, and renal function tests uncover clinically unsuspected disease of sufficient import as to alter the planning or conduct of surgery, or even lead to cancellation, is well known. The treatment of choice for any complication includes early recognition and prophylaxis whenever possible. The application of this concept to pulmonary disease is self evident.

The incidence of respiratory complications in general surgical patients, particularly those undergoing abdominal surgery, is greater than that of all other complications combined. It is also well known that pulmonary impairment is by far the most common contraindication

The Incidence of Post-operative Complications in 1500 Patients

TYPES OF OPERATIONS	1914		1924		1934		1944		1954		Total	
	#	(%)	#	(%)	#	(%)	#	(%)	#	(%)	#	(%)
Inguinal Hernia	85	7.1	35	18 0	35	25.7	46	26.1	45	31.1	246	19.1
Acute Appendicitis	86	3 5	92	23 9	76	18.4	55	14.5	26	11.5	335	14.9
Chronic Appendicitis	26	—	21	23 8	34	23 5	15	6.7	15	6.1	111	13.5
Laparotomy	10	60.0	27	55.6	37	21.6	27	40 7	28	31.2	129	39.5
Upper Various Abdominal	23	13.0	29	37.9	23	56 5	26	50.0	26	53.8	127	42 5
Stomach	9	33.3	46	67.4	31	51.6	22	68.2	38	71.1	146	63.0
Perforated Peptic Ulcer	2	50.0	5	800	4	50 0	4	50.0	5	800	20	65.0
Acute Intestinal Obstruction	16	18.8	10	40.0	10	60.0	11	63.6	6	33.3	53	41.5
Kidney	12	—	14	21.4	8	—	12	—	13	46.5	59	15.3
Bladder and Prostate	9	11.1	7	—	13	30.8	34	29.4	31	77.4	94	15.3
Perineum	8	—	10	—	13	15 4	22	4.5	26	7.7	79	6 3
Gynaecological	14	7.1	4	—	16	12.5	26	7.7	41	14.8	101	8.9

1914 - 1917

TABLE I. CONDENSED FROM ANSCOMBE: PULMONARY COMPLICATIONS IN ABDOMINAL SURGERY. YEARBOOK PUBLICATION. CHICAGO. 1957.

TABLE I.

Depicts the incidence of pulmonary complications in 1500 patients from 1914-1954. Note the high incidence with upper abdominal procedures as compared to perineal operations.

Condensed from Anscombe.

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* Research Fellow, Thoracic and Cardiovascular Surgery (Supported by PHS Training Grant # HE 5337-08).

** Associate Professor of Surgery and Chief, Division of Thoracic Surgery.

[1] From the Division of Thoracic Surgery, Medical College of South Carolina, Charleston, South Carolina.

PREOPERATIVE M.B.C. (%) OF PREDICTED		20-39	40-59	80-79	>80	TOTAL
# OF PATIENTS		10	60	148	244	460
(%) OF MORTALITY DUE TO —	RESPIRATORY INSUFFICIENCY	60	13.3	0	0	3.0
	CARDIAC ARREST	10	5	0.7	0	1.1
	BRONCHOPLEURAL FISTULA	0	0	1.4	0.8	0.9
	HEMORRHAGE	0	0	0.7	1.2	0.9
	PROGRESSIVE DISEASE	0	0	2.1	0.4	0.9
	UNRELATED TO SURGERY	0	0	2.7	0.8	1.3

TABLE II. MORTALITY FROM PULMONARY AND CHEST WALL SURGERY

from E.A. GAENSLER INTERNATIONAL ANAESTHESIOLOGY CLINICS
FEB 3, 1965

TABLE II.

Shows the correlation between pre-operative pulmonary reserve and patient mortality in 460 patients studied at Boston City Hospital. Note the high correlation rates for decreased pulmonary reserve with respiratory insufficiency and cardiac arrest.

From Gaensler.

to thoracic and cardiovascular surgery today, and is certainly the most important cause of operative and post-operative mortality. Table I describes the incidence of post-operative pulmonary complications at the London Hospital from 1914 to 1954.[2] Note that surgery on the upper abdomen alone accounts for a complication rate of greater than 50%, and that intraperitoneal procedures are fraught with more than twice the complication rate as compared to extraperitoneal procedures. Similar observations have been reported by other authors.[3, 4] Realization that these rates of complications have not significantly changed for the past 40 years[5] should stimulate the surgeon to review periodically the status of this set of problems.

Table II depicts the mortality rate in 460 patients who underwent pulmonary or chest wall surgery at the Boston City Hospital. From this study[6] it is seen that respiratory insufficiency was the most common cause of death and that its incidence is intimately related to pre-operative pulmonary reserve. Another cause showing this relationship was cardiac arrest. Figure I correlates the degree of pre-operative reserve with post-operative disability in the same 460 patients. Patients with no disability or slight disability were gainfully employed one or more years post-operatively. Those with moderate disability could work part-time or were rehabilitated for sedentary occupations. Those with severe disability were unable to work at all, and those totally disabled were largely unable to care for themselves. The increasing discrepancy between the vital capacity and the maximal breathing capacity suggests that the patients in the categories on the right had increasing degrees of obstructive disease.[6] It is generally agreed that in obstructive disease, the maximal breathing capacity will be affected far in excess of the vital capacity, which remains largely unchanged: whereas in restrictive disease, the major change is seen in the vital capacity. It is agreed, too, that approximately 90% of the complications generally encountered will be due to obstructive disease.[1, 7]

Realizing that the patient with the highest

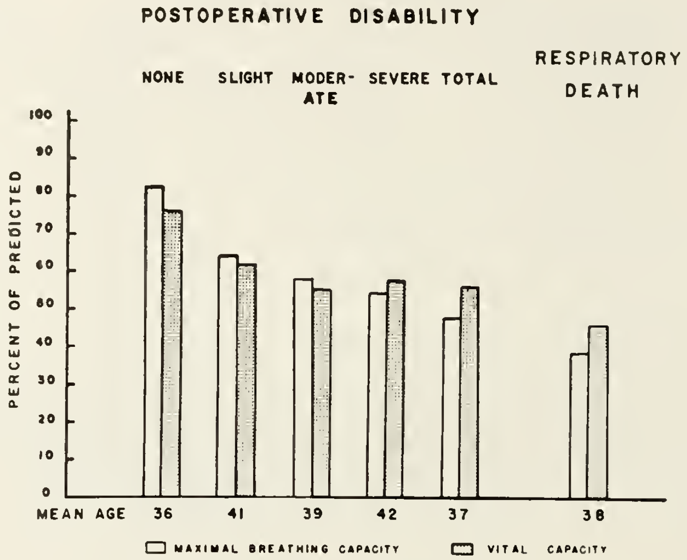

FIGURE I.

Demonstrates the degree of post-operative disability in 460 patients undergoing chest wall or pulmonary surgery at Boston City Hospital. Note that the loss of maximal breathing capacity in excess of that of vital capacity would indicate that the patients in the last three categories were afflicted with varying degrees of obstructive disease.

From Gaensler, Journal of Thoracic Surgery, February, 1955.

probability for developing post-operative pulmonary complications will display some manifestation of impaired pulmonary function or chronic lung disease pre-operatively, the surgeon may be alerted to recognize, evaluate, and apply prophylactic care for such patients by a careful search for the following factors:

1. A history of shortness of breath, wheezing, cough, sputum production, or any other symptom of cardiopulmonary disease.
2. A history of previous thoracic surgery.
3. Physical findings of rales, expiratory wheezing, rhonchi, hyperresonance, distant breath sounds, clubbing, cyanosis, or shortness of breath with tachycardia from mild to moderate exercise, or laboratory findings of polycythemia or of cyanosis.
4. Evidence of emphysema or other thoracic pathology in the routine pre-operative chest x-ray film.

Thus, from simple clinical evaluation of the patient and routine pre-operative laboratory studies, the majority of patients who may experience post-operative pulmonary complications may be recognized. Such patients represent the "high risk group" for post-operative pulmonary complications. Stein found a 70% incidence of pulmonary complications in 30 patients with abnormal pre-operative pulmonary functions, but only 30% in 33 patients without these abnormalities.[8] The value of pulmonary function studies performed pre-operatively in this high risk group should then become clear. An important addition to this group should be male smokers who are to undergo thoracic or upper abdominal surgery.[9]

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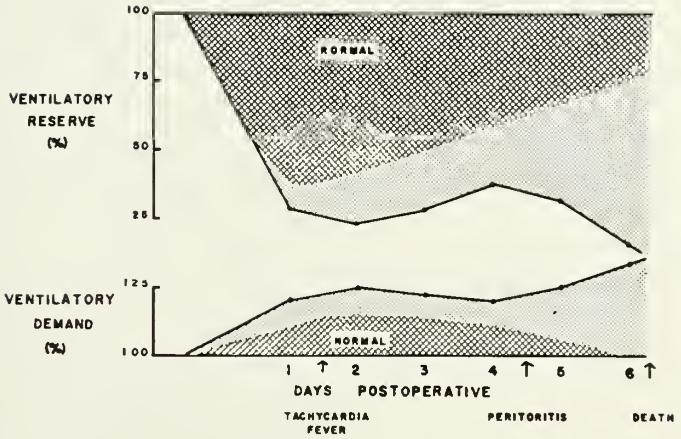

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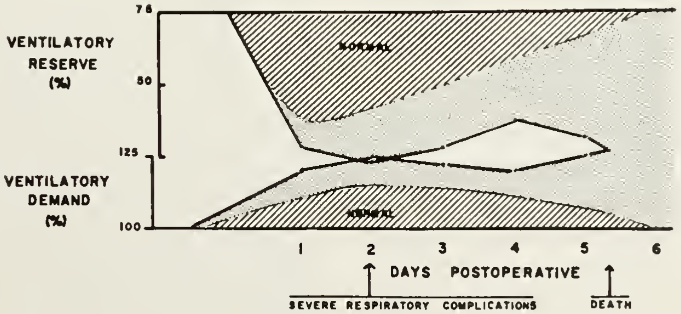

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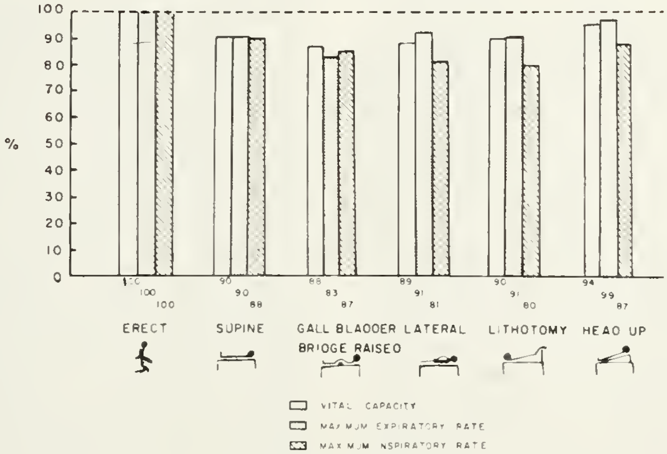

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The surgical dressing may also produce problems. The influence of binders on the incidence of post-operative pulmonary complications has long been recognized. When applied correctly, they limit the movement of the lower ribs and abdomen and raise the diaphragm as well, resulting in a 20% decrease of total lung volume, each compartment being equally inhibited.[27] In 1966 the need for continuous use of the binder has been removed by the Intensive Care Unit, where for the purposes of coughing the nurse may quickly and temporarily splint the abdomnial wall by tightly wrapping a sheet about the patient and encouraging him to cough, after which the sheet is removed and the patient's ventilation is not restricted. The same criticisms applied to binders apply to any heavy tape circular dressing albeit to somewhat lesser degrees. Anscombe[2] recommends a narrow Elastoplast dressing over several layers of gauze. Although abdominal distension is reputed to interfere with respiration, there is no convincing objective evidence to support this premise.[28]

These thoughts tend to focus attention upon the recognition and handling of complications as they occur. The maintenance of careful preoperative bronchial toilet, using postural drainage, breathing exercises, expectorants, and the cessation of smoking at least two weeks pre-operatively (even if it requires earlier hospitalization of patients), will significantly reduce later pulmonary complications in the high risk groups. Pulmonary insufficiency is effectively overcome during the actual operation by mechanical respiratory assistance following intubation. The most reliable method the anesthesiologist has for estimating his effectiveness in this regard is periodic checks on the blood gases and pH during the procedure. However, clinical evaluation of skin color, venous blood color, blood pressure, pulse, and pupils will provide useful warning of impending ventilatory decompensation. The operative functional losses then are largely those of the critical first few hours in the recovery room and to some extent the first two to three weeks after surgery, and are usually due to reduction in the ability to ventilate due to pain, spasm, medication, or in the case of thoracic procedures, some degree of pneumohemothorax.

One of the most important early post-operative considerations is that of hydration, since dehydration leads quickly to increased viscosity of the bronchial secretions.[29] This, plus the well known fact that irritant anesthetic gases cause a significant increase in the amount of bronchial secretions, and the loss of ciliary action as a result of intubation when combined with reflex bronchospasm, are important in the production of post-operative atelectasis. This problem must be carefully anticipated and recognized. Its onset is abrupt—usually within 48 hours of surgery with rapid rise in temperature, pulse, and respiratory rates. There are decreased breath sounds with or without dyspnea. A portable chest film may be obtained to confirm suspicion. Once diagnosed, treatment should be immediate and aggressive. If well conditioned pre-operatively, deep-breathing exercises, sitting, and coughing with the aid of clapping percussion to the chest, will usually give excellent results.[1] Postural drainage is usually not feasible in the post-operative patient, but the importance of "deep" coughing cannot be overemphasized. Some English authors even recommend sniffing ammonia to induce a bout of coughing. Trans-tracheal instillation of a few drops of water or saline will produce the same effect. If it has been necessary to keep the patient "dry," the secretions quickly become inspissated and cough will be ineffective. This may be overcome by the use of intermittent positive pressure breathing and frequent or constant nebulization to keep inspired air at 90-100% humidity. If the desired results are not quickly obtained in this way, one of the various mucolytic agents will be helpful as adjuncts to nebulization: a) N-acetyl cysteine (Mucomist) for stringy viscous sputum—2 ml, 20%, q2h; b) Dornavac for purulent sputum—25-50 thousand U. q4h; c) Tergemist, a wetting agent to permeate more distally into the bronchial tree, or a combination of these agents.

Wheezing is a sign of bronchospasm and should be counteracted upon recognition. This can be accomplished on a short-acting basis by nebulization with Isuprel, or by injection of Bronchephrin, or ephedrine, and may be supplemented with longer acting agents such as aminophyllin administered intravenously or by rectal suppository. If adequate results are not obtained within three to four hours as determined clinically or by x-ray, then endotracheal suction should be performed periodically (q2-3h. at first). An occasional case might require bronchoscopy to relieve endobronchial obstruction and persistent atelectasis. If such be the case, the patient's general condition should be no deterrent, since re-aeration of the lung will result in dramatic improvement. Atelectasis, if not properly and quickly handled, provides the route to more serious problems such as pneumonia or ventilatory failure or both. Ventilatory failure may be divided into early and late forms for the sake of convenience. The early form is usually recognized within 72 hours and is due to preexisting loss of ventilatory reserve, loss of integrity of the thoracic cage, including possible loss of functioning lung tissue or the central respiratory drive or any combination of these.[10]

The delayed form is seen four to five days post-operatively. In general surgical patients it is usually seen in association with late peritonitis or sepsis. Here ventilation is generally threatened from atelectasis or pneumonia or loss of diaphragmatic motion as is found in ileus. Increased cost of breathing or diminished central drive are threats as well.

Ventilatory failure in its early stages is recognized in the restless, anxious patient with warm extremities and skin. Often dyspnea is the most prominent clinical feature. Cyanosis appears to follow mental confusion, which results initially from hypoxia. Hypercarbia maintains the confusion and threatens cardiac arrhythmias and sudden death. Explosive and lethal electrolyte shifts may complicate the course of the hypoxic acidosis which eventually ensues.

Basically, the treatment of ventilatory failure is the control of two factors: getting adequate amounts of oxygen into the patient, and sufficient amounts of CO_2 out. The former helps prevent metabolic (hypoxic) acidosis from occurring, and the latter prevents respiratory acidosis. Oxygen administration is specifically indicated. There should be little fear of removal of the hypoxic stimulus to respiration. The management of this problem demands frequent observation of the blood gases and assisted ventilation to assess the adequacy of respiration, be it spontaneous or assisted. Hypoxemia should maintain priority because when severe, it is always more serious than hypercarbia and must receive prior therapeutic consideration.[30]

This use of oxygen may increase the need for ventilatory support by a respirator since while it may convert cyanosis to a nice pink color and relieve the restlessness, it may also enhance alveolar hypoventilation and lead to progressive respiratory acidosis — that is to say, hypercapnea. Unfortunately, in these patients, most pulmonary function tests are of no assistance in the assessment of ventilatory failure. The best guides to pulmonary function in these circumstances are the arterial blood gases and pH determinations, which allow easy and rapid evaluation of the situation as it evolves. The emergency situation of hypoxic acidosis perforce renders all therapy secondary to the maintenance of adequate minute ventilation and oxygenation. The guidelines of monitoring blood gases require maintenance of the arterial PCO_2 between 35 and 45 mm of mercury and the arterial O_2 saturation at 95% or better. Venous samples are of little aid unless they represent true "mixed venous" blood, drawn from the pulmonary artery by catheterization techniques.

Early tracheostomy may relieve obstruction in the upper airway and decrease the dead space by 35-50%. If mechanical assistance to respiration will be required for a period longer than 24 hours, tracheostomy should be performed using a cuffed tracheostomy tube. In this way, nebulization and the removal of secretions, as well as the administration of positive pressure breathing, are all more easily accomplished and more effective. When this is done, certain standards of minimum tracheostomy care should be maintained, such as antiseptic cleansing of the inner cannula every two to three hours, periodic gentle removal of secretions by suction, using a

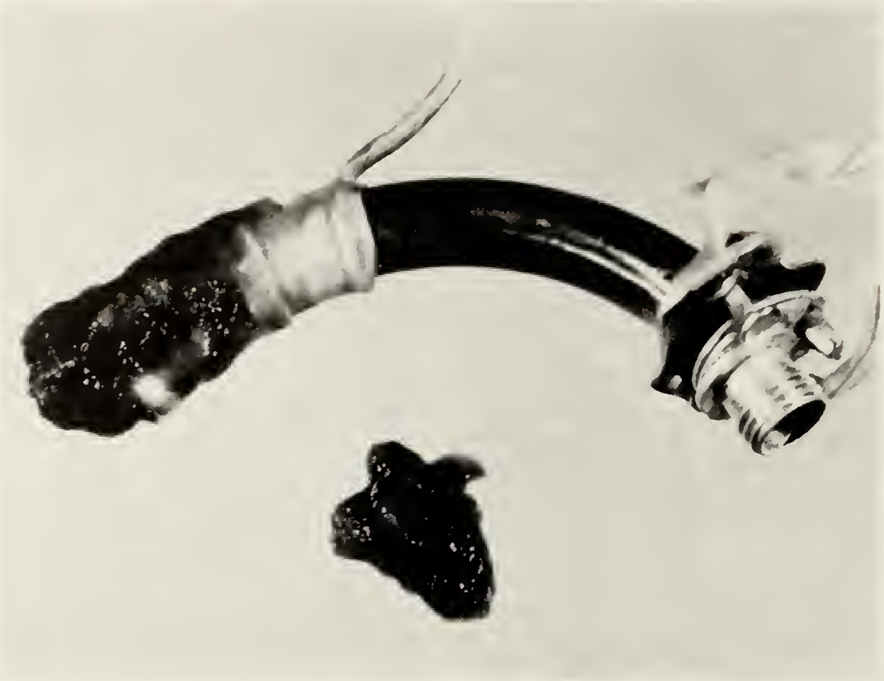

FIGURE IV.
This tracheostomy tube was removed from a patient after 6 days. The patient exhibited no outward signs of respiratory distress while the tube was in place. The free plug above the tube was removed by endotracheal suction, after the tracheostomy tube had been replaced by a clean one.

sterile catheter and sterile gloves each time, and periodic changing of the tracheostomy tube itself. Figure IV is a photograph of a tracheostomy tube which was removed after six days in a patient who exhibited no overt signs of tracheal obstruction. The broncholith pictured was removed by suction immediately following the insertion of a new tracheostomy tube.

The tracheostomy tube cuff should be deflated for four to five minutes every two hours to prevent injury due to compression of the tracheal mucosa which may lead to later tracheal stenosis. There is a tube available on the market with two adjacent balloons enabling constant satisfactory occlusion to be maintained by alternately inflating and deflating either of the balloons. Thus, pressure is not applied continuously in one area.

Pierce and Vandam[31] feel that intermittent positive pressure breathing helps not only to improve ventilation, but aids in decreasing the energy expenditure as well. There are two major problems to be recognized: 1) increase of intrathoracic pressure leads to decrease of the venous return which in turn produces a decrease in cardiac output. Once again, recourse here is to blood gas analyses to monitor the effects of therapy. The surgeon should attempt to set the apparatus at the lowest possible pressure setting which will still maintain adequate alveolar ventilation, the blood gas determinations again being the only accurate means to determine this; 2) prolonged positive pressure ventilation with oxygen concentrations over 50% will usually lead inevitably to degeneration of lung compliance, with loss of the normal elastic qualities, progressive refractory atelectasis and death.[32]

In summary, then, the extreme need for preoperative pulmonary function and blood gas determination is emphasized in terms of postoperative care and management. The importance of early recognition of atelectasis and its sequelae, pneumonia and hypoxia, have been emphasized as well, along with the need for early tracheostomy and assisted ventilation whether it be intermittent or constant, using a mechanical respirator. Some of the more common pitfalls of the management of pulmonary complications are reviewed.

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MEDICAL SCHOOLING IN SOUTH CAROLINA. XI.

EXPANSION PROGRAM: TEACHING HOSPITAL

KENNETH M. LYNCH, M. D., D. Sc., LL. D.

"The time has come," the Walrus said,
"To talk of many things:
Of shoes—and ships—and sealing-wax—
Of cabbages—and kings . . ."
(*Alice in Wonderland*)

With the year 1944 came mixed emotions and thoughts—a stirring of minds by warnings of great changes approaching, developments for which the foundations had already been laid in knowledge and thought but which awaited the kind of shock usually required to compel a historic turn in the course of mankind. As has also been usual, it took WAR to precipitate the crisis. The world was involved in the greatest war of all time—a universal war. If the signs are correct, there can be only one more; then civilization as we know it will have destroyed itself, and what may be left of Homo sapiens will have to start over from such relics as may survive—if at all.

Consciously from the year 1926, when the present narrator returned to the faculty of the Medical College of the State of South Carolina (the name by which it was chartered from 1832 to 1952) it had been in mind that for the institution to fulfill its destiny it must find the course to the front line position that it had held in the pre-Civil War period, 1824-1861. That of course meant relative to the advanced position of the leading medical schools of today; it must bridge a gap that had widened enormously during a hundred year period, in which time South Carolina had fallen from the top to the bottom in economic ratings of the States. It meant that the effort must not merely have the strength to catch up but to hold the accelerating pace that was foreseeable after the war. Determination on that objective crystallized in 1935 when this narrator was appointed Vice Dean.

Inasmuch as it has a bearing on the subsequent course of the Medical College as it will be related in this continued story, it may be pardonable at this point to record that forewarning of that administrative appointment was given by Dr. Francis L. Parker as early as 1927, when the present narrator was offered the deanship of another medical school. Dr. Parker served as vice dean from 1918 to 1935. It also seems fitting to record that when Dean Wilson recommended Dr. Parker's successor he also recorded in the minutes of the Board of Trustees his belief that the same person should succeed to the deanship in due time. Thus there was time and opportunity to cultivate acquaintance with the medical school world and with the leaders of the profession over the nation and the state as well as in other walks of life in South Carolina before succeeding to the deanship on January 1, 1944, after Dr. Wilson had resigned.

Actually, by 1943 the framework of a plan conceiving the development of the form of "Health and Medical Educational Service and Research Center" that has since spread over the entire medical school area of this country was already drawn, and had been discussed extramurally with upper echelon authorities. When the time was ripe they put their shoulders to our wheel. Such men as Dr. Herman G. Weiskotten, dean of the School of Medicine of Syracuse University and chairman of the Council on Medical Education of the American Medical Association, Dr. John E. Deitrick, now dean of the School of Medicine at Cornell, Dr. Victor Johnson, director of the Mayo Foundation and Graduate School of Medicine of the University of Minnesota, and Dr. Donald G. Anderson, dean of the School of Medicine at the University of Rochester, came down to support us at crucial times, while many others lent a hand when called upon.

In 1935, Dr. Robert Wilson was sixty-eight years of age and, although quite alert and active, gave every evidence that he was happy to delegate administrative details, in proper relations and perspective, and that kind of relationship immediately became established as a matter of course. There was no transition period, but just a natural culmination of a companionship which had grown to mutual regard and trust through more than twenty years of very close association.

Eight years' experience as Vice Dean was invaluable as preparation for the deanship. Acquaintance with state officials, executive, legislative and judiciary; with the heads of state institutions and agencies; with the members of the Budget Commission (now Board) as well as with the leaders in the Legislature, including the committees on appropriations and on medical affairs, ripened into mutual regard and confidence that held throughout the years of full responsibility in the administration of Medical College affairs. It is a privilege to record again that there could not have been—nor is there ever likely to be—better relations accorded the head of a state institution.

Indulgence seems also in order at this point—as related to the subsequent story, and not merely to personal interest—to record that relations were equally favorable with the medical profession, many of whose members had been former students. Moreover, attentiveness to the interests of the South Carolina Medical Association through the years, including its presidency in 1930-31, as well as membership in the State Board of Health, 1935-45,—the chairmanship of which was resigned when the deanship of the Medical College was accepted—brought close association with the medical leaders of the state. Neither did position in high office in medical organizations of national level—including a number of section chairmanships, two presidencies, the vice presidency of the AMA, and several research awards and many publications—do harm to prestige.

The stage was set, the libretto composed, but the performance must be carefully developed and timed. The people wanted more doctors and more opportunity for their proteges to become doctors—as their government representatives well knew. The alumni wanted an Alma Mater they could brag about. That was the score; the first Act had to show the *sine qua non* of realization of desire—a teaching hospital to be owned and operated by the Medical College.

Except for a brief period in its early years the Medical College had been absolutely dependent upon fragile arrangements with some hospital of other ownership and control for clinical (bedside and ambulatory patient care) teaching opportunity—without which no acceptable medical school can be operated. Nor was this an unusual situation in early medical school procedure in this country, even up to the last years of the 19th century, but with the renaissance of medical education it became acknowledged as fundamentally unsound and inadequate. Now all medical schools have teaching hospitals of their own or utilize hospitals under such agreements as guarantee the same grade of dependability, although many also have affiliate arrangements with other hospitals for auxiliary teaching—as the Medical College also has.

The one period before 1955 when the Medical College owned and operated its teaching hospital was from 1834 to about 1839, during which time the Faculty had withdrawn from the first chartered school and had moved to a building that was previously a theatre at Broad and New Streets. There it developed as much of a "medical educational center" as was conceivable at that time, including a hospital—and thereby had incurred the animosity of other members of the medical profession of the community. That venture was apparently the first complete medical

Congratulations
5/14/55 Harry Truman

educational operation within its own plant by any school in this country. When the Faculty went back to its Queen Street building, apparently that hospital operation was discontinued.

Except for that episode and until 1856, the Medical College depended upon agreements with community authorities for such clinical teaching opportunity as was provided in the course of medical care of the sick in the Poorhouse and in the Marine Hospital (a 50-bed Federal hospital operated by the City) as well as at a local "Dispensary."

In 1856 the first Roper Hospital* was opened on Queen and Mazyck Streets, immediately adjacent to the Medical College, and from that time to 1955, a Roper Hospital was—with certain interruptions — the sole teaching hospital of the Medical College. The origin of Roper Hospital was in the Will of Thomas Roper, Esquire, fulfilling the bequest of the residue of his estate in 1845 to the Medical Society of South Carolina, in trust, "To erect, maintain and regulate a hospital . . . for the . . . relief of . . . sick, maimed and diseased paupers . . . without regard to complexion, religion or nation . . ." The teaching opportunity at this hospital and its successors came from arrangement with the Medical College for professional staffing of charity services by the Faculty. At least from 1906, the heads of the teaching departments of medicine and surgery were respectively Physician-

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*For the story of the Roper Hospital reference is made to articles by Dr. J. I. Waring in *Scribe*, a local medical bulletin, issues of April and May, 1958. The present narrative is only concerned with its relations with the Medical College. Incidentally, a relic of that first Roper may still be recognized in the tenement into which it was later converted.

in-Chief and Surgeon-in-Chief of the Hospital; they were also non-voting participants in meetings of the Roper Board of Commissioners—as was the Dean of the Medical College until about 1955.

In 1873 the Medical Society leased the Queen Street Roper Hospital to the City Council of Charleston, and its operation passed to that government until 1886, when the great earthquake of that year inflicted such damage to the building that it was abandoned, and it was never reopened as a hospital. Instead of repairing the hospital, Council constructed City Hospital at Lucas (now Barre) and Calhoun Streets. When in 1905 the Medical Society made an agreement with City Council by which the City Hospital property was turned over to the Society for the construction of another Hospital and its operation under contract for the care of charity patients of the community, the second Roper Hospital was built on the same grounds and placed in service in February 1906. That was the building that became known as "Old Roper"—the demolition of which was completed by the first of November 1966. Apparently it was not an entirely new building but a reconstruction of the City Hospital on the same site.

Until 1948 the Roper operation included an outpatient clinic, which had been housed for the most part in the Medical College plant after 1935. In 1948 Roper discontinued participation in that clinic and the college assumed the contract with the County of Charleston, and then in the Fall of 1959 the Medical Society declined to continue its hospital service contract with the County to which it had been transferred by City Council in 1932. Again the Medical College absorbed a County contract, and the second Roper Hospital was abandoned. In 1946 the Medical Society built the present Roper Hospital—and has expanded it considerably in recent years. With the abandonment of "Old Roper" and the County contract, the Roper operation has now become entirely a private patient hospital. Although a token connection with the Medical College as an associated teaching hospital was maintained for a few years after 1959, even that has been discontinued at the present (1966). For the first time in 143 years the Medical Society of South Carolina has no part in Medical College affairs except that some of its members are on the Faculty and that there is cooperation in common interest in the Medical Center.

Thus the relationship between the Medical College of South Carolina and Roper Hospital was a partnership of mutual interest and advantage over a period of many years of vicissitudes. In an overall estimate in retrospect it is really remarkable that this relationship held so well for so long. Inasmuch as a full medical school course cannot be operated without adequate hospital teaching opportunity, the Hospital could have closed the Medical College at will, while the reverse could not be said. That dependence of school upon hospital of course placed the latter in dominant position, and so the use of the term "fragile" earlier in this article in expressing the nature of the arrangements of the Medical College with hospitals during nearly all of its history prior to 1955. The reason the connection remained as satisfactory for as long as it did was due to the fact that during the entire time the Faculty was the staff of the hospital, and vice versa. When the Medical College made its bid for the independence a teaching hospital would bring, the weakness of the ties was revealed; when it succeeded, they broke.

That there was only a few days' time for the new regime of January 1, 1944, to revise a budget, already slashed about one third below the previous year's appropriation, and to prepare for hearings before the Legislature convening on January 10, probably was, in retrospect, a fortunate circumstance. The presentations before the committees were made by the simple process of "laying the cards on the table," with the statement of "conviction that it was futile to attempt to meet the demands being made upon the school unless the State committed itself to support by providing the required physical facilities and an adequate annual budget."[1] The outcome was propitious; the Medical College appropriation was raised to the full amount of our revised budget, and we were requested to bring before the next General Assembly a program for the development of the institution as it should be. It is of course a much better position to be requested to do a job than to be begging for the opportunity. Moreover, time was given for the development of a campaign.

The remainder of 1944 was devoted to careful building of the structure of a program that would be understood by the people and their governmental representatives and supported by the medical profession of the state, as well as the areas of medical educational authority at the national level. The support of all three of these interests was recognized as vital to success.

Knowing that the decisive event would be the acquisition of a teaching hospital, the move for that essential was made the initial goal. The normal quota per medical class here had been 40 students, although in the crash military programs 50 had been taken during the war (80% being assigned by the military program and 20% selected by the Medical College). On the basis, as calculated at that time by accreditation standards, of five available hospital beds, or three beds in teaching use per student of the third and fourth year classes, the Medical College was short of the requirements for the enrollment it was accepting. To increase enrollment was inconceivable. Moreover, the prospects were that the existing services would decrease rather than increase under the arrangement then obtaining.

From such calculations and from estimations of physician-population ratios, as well as experience with the applications for admission to the study of medicine, the goal of a hospital of about 500 beds was set for the eventual increase of medical class size to about 80 students. Furthermore, a medical class of that size was believed to be the optimum for desirable processing in a medical curriculum. That judgment was supported by medical educators in high regard—and still is—in spite of heavy pressures upon many schools to increase enrollment. Let it be said here and now—and again—that quality was the *motif* of the Master Plan of the Expansion Program, that quantity must be consistent, and that it is unlikely that South Carolina[2] will provide adequate support in physical facilities and operational budget for more than one state medical school center of the first grade, together with the appurtenances connected with it in a modern Health and Medical Educational, Service and Research Center, in any foreseeable time. To duplicate the physical plant already in existence or now on the drawing boards under ownership by the Medical College in the Charleston Center would call for a capital investment of many millions under present conditions, to say nothing of equipment at additional millions, and land values at more millions—or the necessity of bringing into the Center the other hospitals and health institutions for affiliation (unless the medical college shall itself provide ALL, at double the cost or more). Nor does it take into account the necessity of providing an additional annual appropriation for operation, at least as much as now called for by the Medical College.

Moreover, from actual experience in South Carolina, it would take several years to even get the plans on the drawing boards, and several more to mature an acceptable program—and then the State would have two institutions under separate administrations competing with each other for appropriations. Almost inevitably that would mean that what money the Legislature would provide for the purpose would be divided between the two—and both would be inadequately supported. MONEY may be a *sine qua non,* but it is not the only fundamental.

In a previous article of this series[3] it was expressed that it may "be the time now for again considering the proposition of making the Medical College the 'Medical Branch of the University of South Carolina' or the 'College of Medicine of the University of South Carolina', with a sub-board of trustees, and a separate budget arrangement so as not to cause interference of one with the support of the other, and a 'vice president of medical and health affairs'."

As the campaign for the Expansion Program progressed and the prospects became virtual assurance, a calculated risk was taken to demonstrate good faith; the medical class size was increased by steps until it reached the objective of 80 members in 1952. It is significant that attending the increase of enrollment by 100% the qualifications and numbers of applicants for admission improved, while during the same period complaints occurred over the country that the number of well qualified applicants was decreasing. It is also significant that immediately upon financial guarantee of success the School of Medicine was awarded full "approval" accreditation.

The first exposure of the program, majoring the development of a teaching hospital, was made to the Medical Society of South Carolina, at that time constituting the Charleston County unit of the South Carolina Medical Association and the American Medical Association. Although approval was voted at that meeting, the local resistance, which became quite bitter as time went on, began then. The next step was to request the South Carolina (State) Medical Association to survey the Program. It delegated a commission of seventeen of its members which made a thorough and extended study of the situation and the institution, and held hearings for all interested parties. On January 3, 1946, a special meeting of the House of Delegates of the Association was held and the recommendation of the Commission to approve the Program in toto was adopted by unanimous vote. Later the president of the Association, Dr. James C. McLeod, of Florence, S. C., addressed a joint session of the General Assembly in behalf of the Program.

In the meantime the request of the Legislative committees that we bring before them a program for the development of the school was met, and the Legislature had authorized a survey of the condition and the needs of all of the State institutions of higher learning. The product of that survey, known as the Peabody Survey and Report of 1945, gave special attention to the Medical College; its Expansion Program was endorsed and recommended in full.

Moreover, by good fortune the era of nation-wide hospital construction with Federal matching financial support was coming in—and the State was accumulating a treasury surplus. Under the Congressional (Hill-Burton) Act a state survey of hospital needs was made, from which came a plan for providing the counties with community hospitals and districts with "regional" hospitals, while the hospital sought by the Medical College was established as the state base hospital, the hub of the entire system.

In the 1945 session of the Legislature a modest "planning" appropriation was made and in 1946 a first step was taken toward the major appropriation of $3,110,000 from the $10,000,000 state surplus divided among the six state institutions for permanent improvements in 1947.

Although the Medical College was not considered in competition with the county units in the priorities set up on the adopted State Plan, as a practical matter there was not enough money allotted to South Carolina under the Federal (Hill-Burton) appropriation at the time to provide for some very needy counties and the 66⅔ per cent matching that the Medical College eventually was awarded in the Federal grant for the hospital construction. It was considered best to bide time until the most needy counties had their turn, and, furthermore, many prerequisites to actual construction also required time. The site for the hospital must be secured; plans and specifications must be completed and contracts let; a street must be closed, and many details had to be settled, including a complete revision of the City Plumbing Code.

Although the General Assembly passed the Act appropriating the money in the spring of 1947, it was against strong political resistance—from Charleston as well as Columbia, the motives, however, being actually in opposition to each other. Influential factors in the medical profession of Charleston—and a controlled public press[4]—knowing that local control of the Medical College would be lost, fought the Expansion Program bitterly. That episode would furnish material for a story of professional, civic, public and personal relations and ethics which might make more interesting reading than at least some parts of the present narrative. It is all preserved in voluminous scrapbooks and documents privately kept for "posterity." The motive from Columbia was to so obstruct the Program that another effort might be made to move the school to that location. Regrettably, two members of the Board of Trustees of the Medical College were involved in that; they were not continued on the Board when their terms expired.

Even after the General Assembly passed the appropriation bill, the political pressures were so continued that the Act was not ratified until the last of that year.

All's well that ends well, however. The site for the "teaching hospital," as it was generally called until it was named at the time of dedication the "Medical College Hospital," was already chosen as the two city blocks just across Mill Street from the Medical College. Charleston County Commission (now Council) provided the cost by a bond issue (some $500,000). City Council closed an intervening one block street (Palmetto) and donated that ground, as well as one lot on the corner of Mill and Lucas (now Barre) Streets, and cooperated in every way, including revising the Plumbing Code and approving a bridge over Mill Street from the Medical College to the Hospital. The State Supreme Court obliged by holding a special session which ruled in a friendly suit that the County could legally contribute the site for the state institution. Since the site comprised some 52 private properties—homes as well as a church and cemetery—the acquisition involved the Right of Eminent Domain (condemnation proceedings through court)—in which the Charleston Real Estate Board handled the property appraisals.

During these preparatory proceedings an architect was selected (Hopkins and Baker, Florence, S. C.) and set to work on plans for the heaviest building that had ever been placed here on made ground over "pluff mud" and what was once a tidal creek. Although the architect visited a number of hospitals and consulted other hospital designers, it is really remarkable how much it looks like the "dreamed up" building and how well he organized the complicated and special areas that we listed and even sketched crudely for him to consider.

By the time the site was cleared of houses and prepared for construction operations, the Federal grant funds were ready, the contracts let, and pile driving commenced on September 4, 1951.

During the construction, two entire patient room floors that had been eliminated because the money ran short at the contract letting time were reinstated by an additional state appropriation for the purpose. The top floor, the tenth, which was allotted to the Department of Psychiatry, was reduced for the same reason, but was completed in November 1962 by still another appropriation.

The Medical College Hospital was dedicated on May 10, 1955, with the blessings of both President Harry S. Truman and Senator Lister Hill, while many others who had joined in securing it were present. The dedicatory address was made by Governor George Bell Timmerman, Jr. before a large audience gathered on the front lawn. The newspapers published special congratulatory editions—finally, and *after* success.

The new hospital was opened for patients on September 26, 1955. The key to the Master Plan had opened the way for success of the entire Program. Quality had been protected and quantity consistent with quality assured. However, this was just the beginning; "by reason of its very nature there never can be a finishing point."[1]

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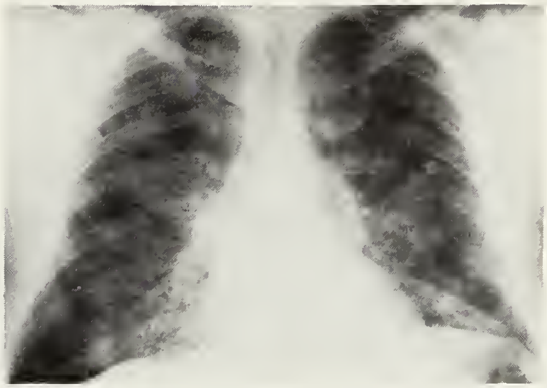
X-RAY FILM OF THE MONTH

S. ELLIOTT PUCKETTE, JR., M. D.
Medical College Hospital
Charleston, S. C.



This PA film of the chest was taken on a 38 year old white male admitted to his local hospital for ulcer-like abdominal complaints which subsequently cleared. The patient had no complaints relative to the chest and this film was taken as a routine procedure. His occupational history did not suggest pneumoconiosis. He appeared to be in strikingly good health with normal physical findings including the lungs but had lost 15 pounds in the past 9 months. His hemoglobin was noted to be 16.4 grams. A left superclavicular lymph node biopsy specimen was negative. At this point, biopsy of the right lung was performed.

This is a case of pulmonary alveolar proteinosis. One of the more informative recent articles on this is that of Larson and Gordinier[1] from which most of the following information is taken.

This rare disease, first described in 1958 by Rosen, Castleman and Liebow[2] has a male predominance with the peak incidence between 31 and 50 years. There is no racial tendency and the case distribution is roughly proportioned to the population of the United States. It has also been reported from 7 other countries. Occupational history gives no clue. More than half the histories suggest an insidious onset of illness. Several have been picked up on routine x-ray films such as this patient was, thus the abrupt onset of an apparent respiratory infection which ushered in the remaining cases may well have been a complication rather than the exciting incident. Cough and dyspnea are the two most prominent symptoms with weight loss, weakness, chest pain and hemoptysis also occurring. There is a tendency towards polycythemia; roughly two thirds of the cases had abnormal serum proteins. Descriptions of x-ray films of the chest vary, but the most suggestive is that of bilaterally finely nodular soft densities radiating out from the hilar areas in a butterfly distribution, and sparing the periphery, such as in this case. Hilar adenopathy is usually absent. Rapid fluctuations in the x-ray appearance have been noted. The pulmonary function studies indicate a restrictive type of ventilatory defect with impairment of diffusion and venous-arterial admixture. Pulmonary infections are quite frequent, with an unusually high instance of mycotic infections. The mortality rate is 28.5% with approximately 40% showing clinical improvement. On microscopic examination, the alveolar spaces are filled with a granular or flocculent material taking a pink stain with hematoxylin and eosin. Inflammatory cells or macrophages are usually absent, or present only in small numbers. Characteristically, the normal flat alveolar epithelium is transformed into a more prominent cuboidal epithelium.

Treatment with large doses of iodides is encouraging. Proteolytic enzymes appear to have some promise. Adrenal steroids are contraindicated. Antibiotics are of value where there is a superimposed infection.

Note—The calcified nodule seen in the left lung is not related to the condition discussed.

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2. Rosen, S. H., Castleman, B., Liebow, A. A.: Pulmonary alveolar proteinosis. New Eng J Med 258:1123.

Circulatory and metabolic alterations associated with survival or death in peritonitis. George H. A. Clowes, Jr., Mikailo Vucinic, Michael G. Weidner, Jr. (Charleston). Ann Surg, 163:866-885, June, 1966.

Diffuse purulent peritonitis remains a life-endangering situation despite advances in therapy based upon sound observations of the associated physiologic and biochemical derangements. Serial hemodynamic and metabolic observations were made in 25 patients with diffuse fulminating peritonitis secondary to a ruptured viscus. Nine of these patients died. Initially, the patients frequently exhibited cardiac indices well below the normal resting value of 2.8 L./M.^{2}/min. This was accompanied by metabolic acidosis and an accumulation of lactic acid. In three patients who died during the early phase, the presence of bacteremia contributed to the apparent heart failure and low outputs. As soon as the cardiovascular system was capable of responding, elevated cardiac indices were observed. If, for any reason, the sustained high cardiac output was not maintained, metabolic acidosis and death supervened. The elevated metabolic rate, great caloric expenditure and the increased respiratory effort, as well as local circulatory effects of inflammation are closely related to the increased requirements for circulation. The rationale of therapy suggested depends upon support of the circulation and reduction of circulatory requirements related to the metabolic demands of the inflammatory tissue. Generous, but controlled, use of fluid and electrolytes, respirators, reduction of elevated body temperature, and maintenance of nutrition can all contribute to the ability of the circulation to satisfy the transport needs throughout the body.

Michael G. Weidner, Jr., M. D.

Early surgical intervention in acute pancreatisis. J. Lataste (Place du Parvis-Notre-Dame, F-75-Paris). Presse Med 74:1875-1876 (Sept 10) 1966.

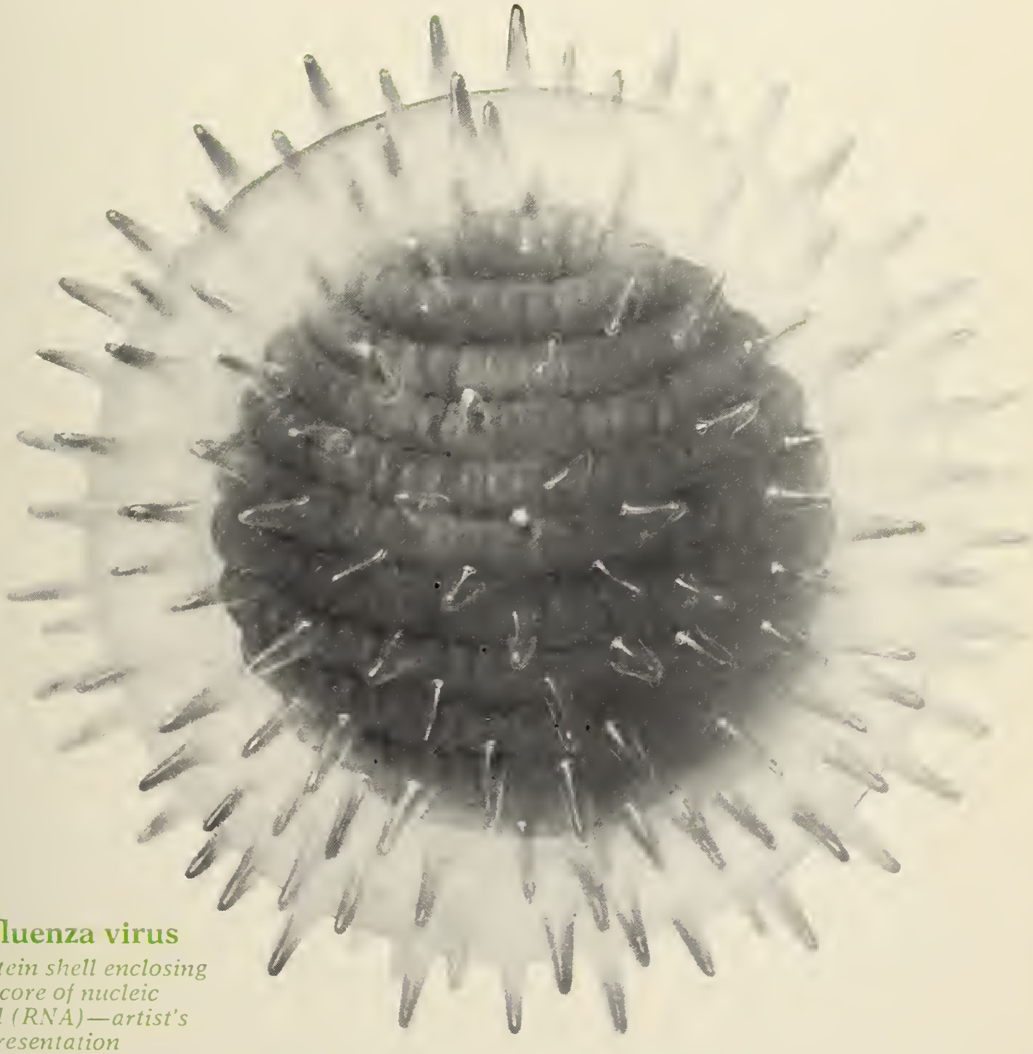
An analysis of case histories of 48 patients with acute hemorrhagic pancreatitis showed that 28 of these had an associated preceding biliary lesion; 12 had common bile duct stones, four of these had impaction of a stone in the ampulla Vateri; six had inflammatory edema of the sphincter of Oddi, and four had cholecystolithiasis also; ten had simple cholecystolithiasis. Thus, 58.3% of all patients with acute pancreatitis had biliary involvement of some kind. Complete obstruction at the sphincter of Oddi was present in 25% of the patients. Of the 48 patients, 23 died within 60 days. Of the 28 with biliary involvement, 14 died. Most of these patients had obstruction of the common bile duct. Eleven of the remaining 20 patients died; in 11 of the 20 there was definitely no biliary involvement and only four of these died. Mortality was highest in patients with biliary obstruction. Emergency surgery for obstruction of the ampulla was performed on two patients and both survived. Five patients had secondary or late sphincterotomy and three survived. Five patients with unoperated obstruction died. From this analysis one can see that disengagement of any pressure on Wirsung's duct is absolutely necessary in order to save a patient with pancreatitis, if biliary involvement is present.

New from Du Pont

Symmetrel®

(Amantadine HCl)

The first oral chemical virostat for the prevention of influenza A_2



Influenza virus

Protein shell enclosing the core of nucleic acid (RNA)—artist's representation

The incidence of influenza A_2. In this country, where influenza is one of the leading causes of morbidity, influenza A_2 (Asian) continues to be a serious medical problem. In 1957 influenza A_2 was responsible for approximately 40,000 excess deaths in a three-month period. Since that year the most prevalent influenza virus has been A_2 (Asian).

What is Symmetrel®? "Symmetrel" (amantadine HCl) is a new synthetic chemical which acts as a molecular barrier to virus penetration. It provides for the first time specific oral medication for the prevention of respiratory infections caused by influenza A_2 (Asian) viruses—an entirely new approach in preventive medicine.

For prescribing information, see last page of this presentation

What Symmetrel® (amantadine HCl) means to you

...the first and only oral chemical agent to prevent influenza A_2 (Asian).

...not a vaccine or antibiotic, but a new synthetic chemical unrelated to any other chemotherapeutic agent.

...unique mode of action: prevents virus penetration of the host cell without affecting vital cell functions.

...specifically active against all influenza A_2 viruses tested to date.

...not indicated for the prevention of influenzal or respiratory illness other than influenza A_2 or for the treatment of established disease.

...does not interfere with normal antibody response; acts in concert with pre-existing antibody.

What Symmetrel® means to your patient

...possible immediate influenza A_2 protection when taken following suspected contact.

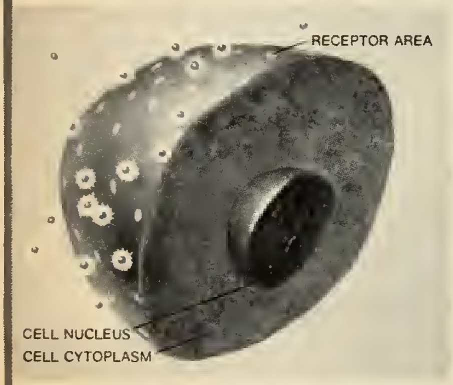
...may be particularly useful during outbreaks or epidemics and for high-risk patients in whom the occurrence of influenza A_2 is especially hazardous.

...a high degree of safety in clinical use.

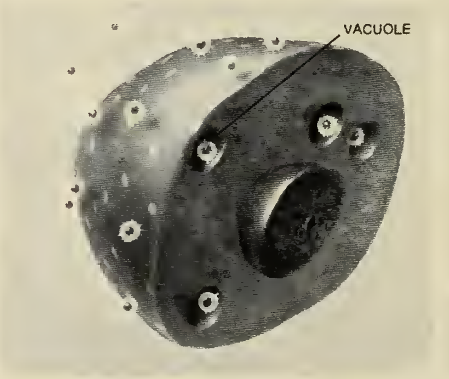
...simple once daily or b.i.d. dosage.

The mode of action of Symmetrel®

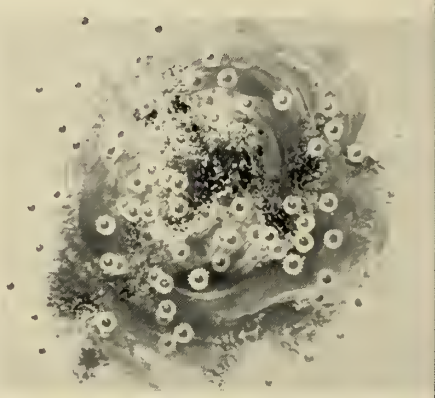
How the influenza virus invades and destroys the untreated cell



1 Viruses outside the cell attach themselves to specific cell receptor areas

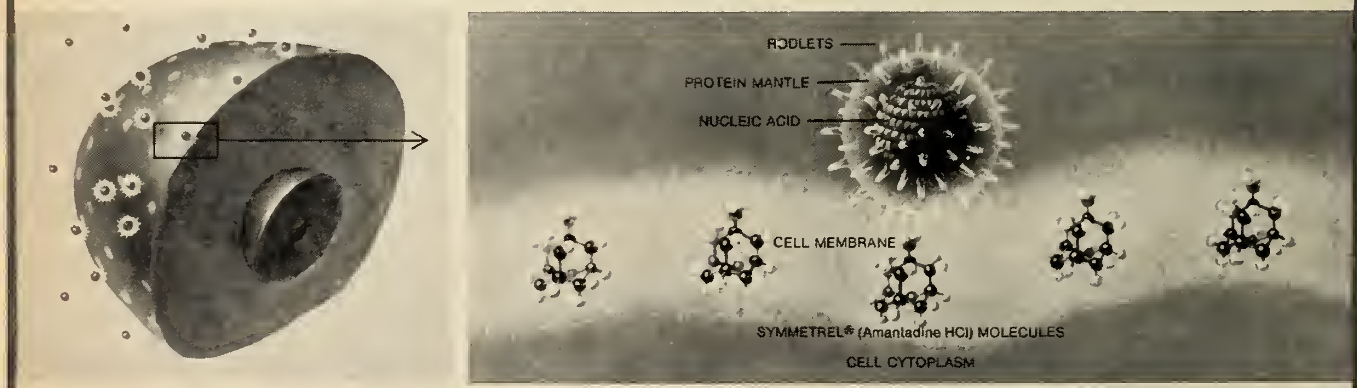


2 The virus is incorporated into a vacuole within the cell. From this vacuole the virus nucleic acid passes into the cell cytoplasm



3 The virus nucleic acid then directs the cell to produce both new virus nucleic acid and virus protein coat material which aggregate to form new virus particles. This process leads to the release of new virus particles and eventual destruction of the cell

How Symmetrel® (Amantadine HCl) prevents virus invasion[1]



Our current knowledge leads us to believe "Symmetrel" acts as a molecular barrier to influenza virus penetration. Shown here in a greatly enlarged section, "Symmetrel"—located at the cellular membrane—effectively prevents (blocks) virus penetration. Thus, "Symmetrel" does not directly destroy the virus particle but acting as a virostat prevents the cycle of virus penetration, virus replication, and cell destruction that is characteristic of virus invasion of animal cells (tissue). *Artist's conception based on current scientific knowledge.*

---

[1] "Mode of Action of the Antiviral Activity of Amantadine in Tissue Culture", Hoffmann, C. E.; Neumayer, E. M.; Haff, R. F.; and Goldsby, R. A., Journal of Bacteriology *90*,623 (1965).

Safety of Symmetrel® Confirmed. When used as indicated, is generally well tolerated. No kidney, liver, bone marrow, or hematological disturbances have been observed.

Prescribing Information

Indications: "Symmetrel" is indicated for the prevention (prophylaxis) of influenza A$_2$ in persons of all age groups. Early use is recommended, preferably before or as soon as possible after actual or suspected contact with individuals suffering from influenza A$_2$. "Symmetrel" should especially be considered for high influenza-risk patient groups such as those suffering from chronic debilitating diseases and elderly persons.

Contraindications: Not indicated for the prevention of influenzal or respiratory illness other than influenza A$_2$ or for the treatment of established disease.

Warnings: Administration to patients with central nervous system disease, particularly geriatric patients with cerebral arteriosclerosis, and patients with a history of epilepsy or other "seizures," requires strict observation for possible untoward effects (see Adverse Reactions). Patients taking psychopharmacologic drugs, central nervous system stimulants, or alcoholic beverages should be observed for possible evidence of intolerance. Those patients who experience central nervous system effects or blurring of vision should be cautioned against driving or working in situations where alertness is important.

No teratogenic effects have been seen in reproductive studies in rats and rabbits. Studies in pregnant women have, however, not been done and use of this drug in women of childbearing age should be undertaken only after weighing the possible risks to the fetus against benefit to the pregnant patient. It should not be administered to nursing mothers since it is not known whether the drug is secreted in the milk.

Precautions: Ineffective against bacterial infections. Patients should be observed for idiosyncratic reactions as with all new drugs. Geriatric patients with pre-existing serious medical illnesses with mental or physical deterioration should be followed carefully medically while taking "Symmetrel." (See Adverse Reactions.)

Adverse Reactions: With higher than indicated doses manifestations of central nervous system effects such as nervousness, insomnia, dizziness, lightheadedness, drunken feeling, slurred speech, ataxia, inability to concentrate and some psychic reactions including depression and feelings of detachment were seen. Occasional blurred vision was reported at higher doses. Some of the milder and less pronounced symptoms above have been reported in a small number of patients taking the recommended dosage of 200 mg per day. Those were mostly transient and disappeared with continued administration of the drug. Some geriatric patients developed paranoid or hallucinatory behavior and became unmanageable while taking 200 mg daily. Medically unselected seriously deteriorated geriatric patients showed poor clinical tolerance after several weeks of daily dosing with 200 mg per day. One elderly patient with a history of prior cerebrovascular accident developed visual hallucinations and grand-mal convulsions while on drug at 800 mg per day. Some cases of dry mouth, gastrointestinal upset and skin rash and rarely, tremors, anorexia, pollakiuria, and nocturia have been also reported.

Safety: When used as indicated, is generally well tolerated. No kidney, liver, bone marrow, or hematological disturbances have been observed.

Dosage: *Adults:* Two 100 mg capsules (or 4 teaspoonfuls of syrup) as a single daily dose or the daily dose may be divided into one capsule of 100 mg (or 2 teaspoonfuls of syrup) twice a day.

Children: 1 yr.—9 yrs. of age: Calculate total daily dose on the basis of 2 mg to 4 mg per pound of body weight per day (but not to exceed 150 mg per day). Daily dose, given as the syrup, should be given in 2 or 3 equal portions.

9 yrs.—12 yrs. of age: Total daily dose 200 mg given as one capsule of 100 mg (or 2 teaspoonfuls of syrup) twice a day.

How Supplied: *Capsules:* Bottles of 100. Each red, gelatin capsule contains 100 mg amantadine HCl. *Syrup:* Bottles of 1 pint. Each 5 ml (1 teaspoonful) contains 50 mg amantadine HCl.

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Symmetrel®
(Amantadine HCl)
A molecular barrier to virus penetration

arrest diarrhea

in • gastroenteritis • acute infections

LOMOTIL®

Each tablet and each 5 cc. of liquid contains:

diphenoxylate hydrochloride	2.5 mg.
(Warning: May be habit forming)	
atropine sulfate	0.025 mg.

Effectiveness: Lomotil possesses a unique degree of effectiveness in both acute and chronic diarrhea.

Convenience: Lomotil is supplied as small, easily carried, easily swallowed tablets and as a pleasant, fruit-flavored liquid.

Versatility: The therapeutic efficiency, safety and convenience of Lomotil may be used to advantage alone or as adjunctive therapy in diarrhea associated with:

- **Ulcerative colitis**
- **Acute infections**
- **Irritable bowel**
- **Regional enteritis**
- **Drug therapy**
- **Food Poisoning**
- **Functional hypermotility**
- **Malabsorption syndrome**
- **Ileostomy**
- **Gastroenteritis and colitis**

Dosage: For correct therapeutic effect—Rx correct therapeutic dosage. The recommended initial daily dosages, given in divided doses, until diarrhea is controlled, are:

Children: Age	Total Daily Lomotil Dosage	Lomotil Liquid Dosage (Each teaspoonful [4 cc.] contains 2 mg. of diphenoxylate HCl)
3-6 months	3 mg.	½ tsp. 3 times daily
6-12 months	4 mg.	½ tsp. 4 times daily
1-2 years	5 mg.	½ tsp. 5 times daily
2-5 years	6 mg.	1 tsp. 3 times daily
5-8 years	8 mg.	1 tsp. 4 times daily
8-12 years	10 mg.	1 tsp. 5 times daily

Adults: 20 mg. (2 tsp. 5 times daily or 2 tablets 4 times daily) Based on 4 cc. per teaspoonful. Maintenance dosage may be as low as one-fourth the initial daily dose.

Precautions: Lomotil, brand of diphenoxylate hydrochloride with atropine sulfate, is a Federally exempt narcotic preparation of very low addictive potential. Recommended dosages should not be exceeded. Lomotil should be kept out of reach of children since accidental overdosage may cause severe respiratory depression. Lomotil should be used with caution in patients with impaired liver function and in patients taking addicting drugs or barbiturates. The subtherapeutic amount of atropine is added to discourage deliberate overdosage.

Side Effects: Side effects are relatively uncommon but among those reported are gastrointestinal irritation, sedation, dizziness, cutaneous manifestations, restlessness, insomnia, numbness of extremities, headache, blurring of vision, swelling of the gums, euphoria, depression and general malaise.

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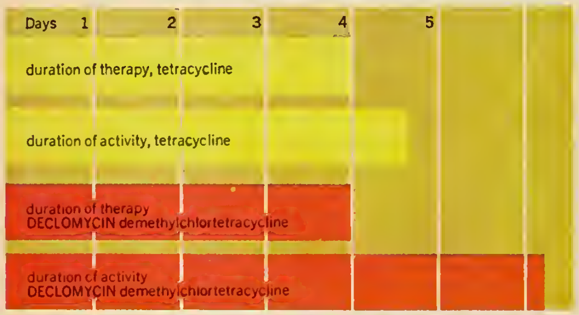
DECLOMYCIN®

DEMETHYLCHLORTETRACYCLINE

produces 1-2 "extra" days' activity



1-2 "extra" days' activity
after the last dose to protect against relapse

one 300 mg tablet b.i.d.
or
one 150 mg capsule q.i.d.

Effective in a wide range of everyday infections—respiratory, urinary tract and others—in the young and aged—the acutely or chronically ill—when the offending organisms are tetracycline-sensitive.

Contraindication—History of hypersensitivity to demethylchlortetracycline.

Warning—In renal impairment, usual doses may lead to excessive systemic accumulation and liver toxicity. Under such conditions, lower than usual doses are indicated and, if therapy is prolonged, serum level determinations may be advisable. A photodynamic reaction to natural or artificial sunlight has been observed. Small amounts of drug and short exposure may produce an exaggerated sunburn reaction which may range from erythema to severe skin manifestations. In a smaller proportion, photoallergic reactions have been reported. Patients should avoid direct exposure to sunlight and discontinue drug at the first evidence of skin discomfort.

Precautions and Side Effects—Overgrowth of nonsusceptible organisms may occur. Constant observation is essential. If new infections appear, appropriate measures should be taken. Use of demethylchlortetracycline during tooth development (last trimester of pregnancy, neonatal period and early childhood) may cause discoloration of the teeth (yellow-grey-brownish). This effect occurs mostly during long-term use but has also been observed in short treatment courses. In infants, increased intracranial pressure with bulging fontanels has been observed. All signs and symptoms have disappeared rapidly upon cessation of treatment. Side reactions include glossitis, stomatitis, proctitis, nausea, diarrhea, vaginitis and dermatitis. If adverse reaction or idiosyncrasy occurs, discontinue medication and institute appropriate therapy. Anaphylactoid reactions have been reported.
Average Adult Daily Dosage: 150 mg q.i.d. or 300 mg b.i.d. Should be given 1 hour before or 2 hours after meals, since absorption is impaired by the concomitant administration of high calcium content drugs, foods and some dairy products.
Capsules: 150 mg; *Tablets:* film coated, 300 mg, 150 mg, and 75 mg of demethylchlortetracycline HCl.

LEDERLE LABORATORIES, A Division of American Cyanamid Company, Pearl River, New York Lederle
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For he's a jolly good fellow

But what does he think?

Many overweight patients can benefit from the appetite control provided by the sustained anorexigenic-tranquilizing action of BAMADEX SEQUELS: anorexigenic action of amphetamine; tranquilizing action of meprobamate; prolonged action through sustained release of active ingredients.

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DEXTRO-AMPHETAMINE SULFATE (15 mg.) WITH MEPROBAMATE (300 mg.) SUSTAINED RELEASE CAPSULES

to help establish a new dietary pattern

Contraindications: Dextro-amphetamine sulfate: in hyperexcitability and in agitated prepsychotic states. Previous allergic or idiosyncratic reactions to meprobamate.
Precautions: Use with caution in patients hypersensitive to sympathomimetic compounds, who have coronary or cardiovascular disease, or are severely hypertensive.
Dextro-amphetamine sulfate: Excessive use by unstable individuals may result in psychological dependence.
Meprobamate: Careful supervision of dose and amounts prescribed is advised, especially for patients with known propensity for taking excessive quantities of drugs. Excessive and prolonged use in susceptible persons, e.g. alcoholics, former addicts, and other severe psychoneurotics, has been reported to result in dependence on the drug. Where excessive dosage has continued for weeks or months, reduce dosage gradually. Sudden withdrawal may precipitate recurrence of preexisting symptoms such as anxiety, anorexia, or insomnia; or withdrawal reactions such as vomiting, ataxia, tremors, muscle twitching and, rarely, epileptiform seizures. Should meprobamate cause drowsiness or visual disturbances, reduce dosage and avoid operation of motor vehicles, machinery or other activity requiring alertness. Effects of excessive alcohol consumption may be increased by meprobamate. Appropriate caution is recommended with patients prone to excessive drinking. In patients prone to both petit and grand mal epilepsy meprobamate may precipitate grand mal attacks. Prescribe cautiously and in small quantities to patients with suicidal tendencies.
Side Effects: Overstimulation of the central nervous system, jitteriness and insomnia or drowsiness.
Dextro-amphetamine sulfate: Insomnia, excitability, and increased motor activity are common and ordinarily mild side effects. Confusion, anxiety, aggressiveness, increased libido, and hallucinations have also been observed, especially in mentally ill patients. Rebound fatigue and depression may follow central stimulation. Other effects may include dry mouth, anorexia, nausea, vomiting, diarrhea, and increased cardiovascular reactivity.
Meprobamate: Drowsiness may occur and can be associated with ataxia; the symptom can usually be controlled by decreasing the dose, or by concomitant administration of central stimulants. Allergic or idiosyncratic reactions: maculapapular rash, acute nonthrombocytopenic purpura with petechiae, ecchymoses, peripheral edema and fever, transient leukopenia. A case of fatal bullous dermatitis, following administration of meprobamate and prednisolone, has been reported. Hypersensitivity has produced fever, fainting spells, angioneurotic edema, bronchial spasms, hypotensive crises (1 fatal case), anuria, stomatitis, proctitis (1 case), anaphylaxis, agranulocytosis and thrombocytopenic purpura, and a fatal instance of aplastic anemia, but only when other drugs known to elicit these conditions were given concomitantly. Fast EEG activity, usually after excessive dosage. Impairment of visual accommodation. Massive overdosage may produce drowsiness lethargy, stupor, ataxia, coma, shock, vasomotor and respiratory collapse.

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President's Pages

A conference was called in Washington to discuss the Regional Program for heart disease, cancer, and stroke. It was "to gather information and material which can be used in the forthcoming report of the Surgeon General to the President and the Congress on Regional Medical Programs." This program is to shorten the time lapse between discoveries in research centers and clinical application. The purpose is to furnish better medical care to all patients, high and low, rich and poor. The conference was attended by over 600 people. This should not be considered an endorsement of the program but rather a means of satisfying one's curiosity about its workings.

The bill was one of the shortest on record, only eleven pages long; in fact, so short, as one wag put it, "It's surprising that it was passed at all." In addition to being short it set very broad guide lines and that is one reason whenever its director, Dr. Marstan, has talked he has of necessity talked only in general terms. The bill is to establish areas where continuing education of physicians can be carried out. These areas are not limited to a state. California will probably end up with ten to fifteen regions. Some western states such as Wyoming, Montana, Utah, and Idaho may combine to form one region. Pennsylvania will probably have three regions; Tennessee probably two. Generally speaking a region relates to one or more medical schools.

Forty-eight organizational grants have been approved. In these grants 90 per cent of the population are covered. The organizations receiving the grants vary. As in South Carolina, generally the medical schools have been the grantees. In Georgia and Nebraska the state medical associations have received the funds. In California and Minnesota foundations have been the recipients. One region that is certainly the most disconnected is Washington and Alaska. A doctor representing that region suggested that it might as well include part of Siberia while they were at it. The organizational grants are for one year, two years, two years and six months, or whatever was asked for. The first operational grant is expected to be approved the latter part of this month.

What are the requisites for approval of a program? They vary from region to region depending upon the needs and the opinion as to the best means of answering the needs. But there are three main parts. *First*, the core of the program. This is the program designed to bring to the practicing physician the latest development in his field. One of the best methods of its accomplishment is to have an advisory committee of practicing physicians advise the director of the program what is needed in the way of instruction. This is the purpose of the program to keep the practicing physician informed so as to assure the best possible care of his patients. The *second* part of the program is cooperation of all elements of health care; the physicians' organizations, the Public Health Department, the Heart Association, the Cancer Society, the Crippled Children's Program, etc. This is an all-inclusive effort for all-out instruction of the physician and allied personnel in every phase of health care for the patient's good. Without the cooperation of every facet of health care the program will not be appproved and it will not function. *Third* and most important is the operational phase. This is the means of informing the physician, this is the method by which he will learn to care better for his patients. Greater demands are constantly being made on a physician's time. There are fewer doctors to care for more people who are better informed and demand and have every right to receive better medical care. This care should be available to the family in the country, in the city, and in the suburbs, whether rich or poor. We as physicians must bring all our ingenuity into play to devise methods to conserve our time better. Perhaps we should consider allowing nurses to do some of the minor procedures we do now. Perhaps we can delegate authority to some who can give advice and suggestions for simple matters which consume so much of a doctor's time. Perhaps we, in time, will have a social service worker for a group of physicians. After all we must never lose sight of the obvious fact that the vast majority of medical care is still and will remain in the doctor's office. Some hospital administrators do not like to be reminded of this fact. We doctors must explore new methods, try ideas to lessen the burden on the physician and allow him more time to care for the patient in greater need of his abilities.

George Dean Johnson, M. D.

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50 YEARS AGO

The Journal of the South Carolina Medical Association

February, 1917

The Optometry Bill was under discussion. Fees for examinations for life insurance were set at a minimum of $5.00.

Two cases of "thymic death" were reported. The "old fashioned country doctor" received some kindly words at his passing.

Dr. M. H. Wyman of Columbia read a paper on Venereal Prophylaxis at the 2nd District Meeting in Barnwell. The Baker Sanatorium in Charleston advertised room rates at $1.75 to $7.00 a day.

UTOPIA PEDIATRICIA, 19??

(Ancillary Medical Personnel Division)

". . . Hello . . . Yes, Mrs. Jones, this is your Neighborhood Child Health Counselor. Can I help you? . . . Several problems with Johnny? . . . All right. What is his computer number? . . . Fine . . . Now then, we have his Life Health Record . . . What concerns you? . . . What to feed him? . . . Well, that's no problem. His Nutrition Counsellor is due there tomorrow with his new diet Instruction Pamphlet 8-C . . . What else? . . . He doesn't like his TV Math Instructor and won't listen to class? . . . Well, this could be serious. I suggest you call XZ2-432-29101 and let the Child and Adolescent Psychology Advisor help you with this . . . Yes . . . Your family Psychometric Profile Records are banked there, and he can easily outline a treatment program for you . . . Fine . . . What else? . . . A rash? . . . Very well, hold him up to the Photo-scanner . . . A little closer please . . . That's fine . . . Aaah . . . The Photo-scanner tells us this is just a heat rash, and also that your Subdivision Dwelling Master Thermostat is set too high . . . What? . . . Oh yes. The Health Engineering Coordinator has been automatically notified . . . Anything else? . . . The doctor? . . . No, we haven't seen him around for a while . . . Why do you ask??"

From the Bulletin of the Muscogee County (Georgia) Medical Society

Editorials

Heredity and Poverty

Dr. William T. Shockley of Stanford University has made a proposal that we study the role of heredity in the perpetuation of poverty. This is a bold whisper against the blasts that come out of Washington maintaining that environment is the sole cause of the perpetuation of the needs of the class of people who require the dole, the welfare funds, or similar solace to their unfortunate conditions. If a study could convince us that heredity is a major factor, the Welfarers might have a hard time to justify their present burgeoning and apparently endless programs for creating new environments.

This editor awaits reports with much interest—if they can be accomplished in these days. He is aware of a family which came to South Carolina eleven generations ago bringing along a certain indentured servant. Without specific reflection on the state of indentured servants, it seems strange that the same family has always been prominent in its community, and the family of the indentured servant remaining today in a social status comparable to that in which they arrived, and live not five miles from their original point of arrival. Is this environment or indolent genes?

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Mortality Trends

A report from the Department of HEW summarizes our lack of progress in reducing mortality over recent years. Figures for the period 1954-1963 indicate that the downward trend began in 1954 to level off as a result of marked increase in certain diseases.

Arteriosclerotic heart disease increased 23 percent, relatively more for women, though men still suffered a rate that was more than one and one-half times the rate for females. Malignant neoplasms of the respiratory system skyrocketed by 46 percent; nine tenths of the deaths were due to cancer of the lung.

Accidents were booming elements in the picture, the leading cause of death in children and young adults. The motor vehicle took its increasingly dreadful toll.

Pneumonia climbed, even in years free of influenza epidemics. Diabetes mellitus went up by 6 percent. Cirrhosis of the liver became more common. Suicide in the young was unfortunately popular. Risk of death from ulcer of the stomach or duodenum increased appreciably.

Communicable disease has yielded its preeminent place to other perhaps more difficult diseases.

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The Family Physician

Periodically a sound of mourning arises over the status of the good old family doctor, who in some quarters is said to be rapidly approaching the position of the dodo. The horse and buggy doctor exists now almost as a rather rare curiosity. In the recent rapid growth and development of the specialties, the brilliant new accomplishments of the practitioners of the refined but fragmented art and science of medicine have obscured the importance of a type of medical practice for which there is still an urgent need.

In the years from 1931 to 1960 the number of general practitioners decreased by one half, while the attractions of specialty practice and the allurements of research siphoned off the potential replacements. Promise of better financial rewards and easier ways of living have been strong influences in this diversion. Whereas in earlier times the specialist usually did some general practice (a very wholesome discipline) before he undertook training in his chosen restricted field, nowaday he usually goes directly from medical school into specialty training, thus eliminating his potential as at least a temporary general practitioner.

Various commissions and medical organizations are seeking a solution for the present difficulty. All agree that the need for a general practitioner, personal physician, family physician, or primary physician — call him what you will — has not diminished and will continue indefinitely. There will always be a place for the doctor who can give comprehensive care to the limit of his capabilities and then gracefully refer his problems to the appropriate resource for special assistance.

There has been an unfortunate tendency to think of the personal physician as a sort of first aid man who runs a clearing station. Many people forget the fact that this physician can handle alone a very high proportion of the conditions which are presented to him, and is well equipped to judge the need for a specialist and the selection of a proper consultant, with whom he can work in mutual harmony and continuity.

Patients must have this kind of doctor available. Nowadays he must become somewhat better equipped than was his older prototype. He must know intimately what special help is available, and how far he himself can venture in his work. To develop this sort of comprehensive knowledge he must undergo much more training than he did in the past. He cannot jump from medical school into practice and expect to be truly effective, or to develop his knowledge by short experience.

Careful studies have brought out the recommendation that the general practitioner should desirably have three to four years of postgraduate training which would include "internal medicine, pediatrics, surgery, psychiatry, obstetrics and gynecology, and community medicine, as well as the behavioral and social sciences". While this sounds elaborate, it would be no more than one would want for his own family doctor. By virtue of this long training this new kind of doctor would become a specialist in his own right, the peer of other specialists, some of whose fields may well be less vital to the health of the public.

Physician Shortage in South Carolina

In a letter from the State Board of Health concerning assistance in Student Loan Programs, the areas of the state which come under the definition of "physician shortage" are listed. Any area with less than one physician to 1500 residents, with certain other considerations as to age and availability of the doctors, is so classified. There is no racial separation of population.

Liberal terms are given to those who wish to borrow money from the Public Health Service to accomplish their education, provided the borrower agrees to serve in an area of shortage for a fixed period of time.

Using available information, the State Board of Health has provided a list of areas of South Carolina which are in the "deprived" category. It requests information which may modify the present ratings. The list is approximate, and does not take into account the services of federal physicians. The portion of the tabulation shown below indicates that our state's supply of physicians is far from a desirable level.

(Name of County or Other Designated Shortage Area) County	No. of Additional Professional Personnel Needed
Abbeville	8
Aiken	14
Allendale	5
Bamberg	1
Barnwell	1
Beaufort	15
Berkeley	17
Calhoun	5
Cherokee	9
Chester	10
Chesterfield	9
Clarendon	14
Colleton	8
Darlington	11
Dillon	9
Dorchester	6
Edgefield	2
Fairfield	8
Georgetown	6
Hampton	3
Horry	5
Jasper	5
Lancaster	9
Laurens	9
Lee	10
Lexington	24
Marion	1
Marlboro	4
McCormick	4
Newberry	4
Oconee	3
Pickens	4
Saluda	6

Sumter	8
Union	10
Williamsburg	11
York	1
Subdivisions of Counties:	
Charleston County:	
St. James-Santee Dist.	2
Edisto Island	1
St. Paul's remainder	5
Wadmalaw Island	2
Johns Island	5
Kershaw County:	
Bethune division	2
Orangeburg County:	
Elizabeth, Goodland, Hebron & Liberty	5
Branchville, Bowman, & Cow Castle Twnsps.	4
Elloree, Eutaw, Holly Hill, Providence & Vance Townships	7
Richland County:	
Blythewood Division	2
Dutch Fork Division	3
Eastover Division	3
Hopkins Division	2

Hospital Obstetrics

A birth rate declining since 1961 has reduced considerably the use of obstetrical beds in hospitals. A further drop in the rate is anticipated for 1967, and hospitals now find themselves with a surplus of beds assigned to obstetrical patients. Some institutions have averaged less than 50 percent occupancy.

Two solutions have been tried. One is to allow proper cases other than obstetrical to use the empty beds in the wards, and this seems to be a satisfactory move. Another, where duplicate accommodations are available in a community, is to concentrate or consolidate services, so that one hospital or certain hospitals can handle all obstetrics, thus making available the whole complement of beds in another. This move has been made in two Pittsburgh hospitals with resulting economy, more effective use of personnel, and increased bed space for general use.

Meetings

The Department of Otolaryngology of the Illinois Eye and Ear Infirmary and the College of Medicine of the University of Illinois at the Medical Center, Chicago, will conduct a postgraduate course in Laryngology and Bronchoesophagology from April 10-22.

The 20th National Conference on Rural Health will be held in Charlotte, March 10-11. The theme will be "Rural-Urban Health Relationships".

CORRESPONDENCE

December 22, 1966

Milford O. Rouse, M. D.
President
American Medical Association
Dallas, Texas

Dear Milford:

When you became president of the A. M. A. I was, as you know, delighted. I never thought that I would feel compelled to ask an old friend for assistance in trying to bring this great organization to the aid of its own members. The house of delegates, under pressure from a well organized group in the section on Ophthalmology, and I believe contrary to the best judgment of the Judicial Council, has refused against all the best traditions of medicine to take any positive stand on the matter of dispensing glasses by ophthalmologists. This exceedingly profitable practice is becoming more and more widespread because of lack of firmness by the house of delegates. As a result Ophthalmology in particular and medicine in general is getting a blacker and blacker eye and rightly so.

I implore you to use what weight you have to bring about the end of this dispensing business. All excuses for it are flimsy and full of holes. I could tell you things that would make you ashamed for medicine. I would like to have your opinion, since it is possible I shall testify before the subcommittee on Anti-trust and Monopoly the latter part of January. While I do not like the idea of federal interference I see no alternative unless some promise, not apparent now, is given for concerted and positive action to protect the public and the medical profession itself.

With every good wish for a great year as President of the American Medical Association, and with the compliments of the season.

Sincerely yours,
J. W. Jervey, Jr., M. D.

DOCTORS IN THE NEWS

Dr. Reece Funderburk, in his first political race, was elected mayor of Lancaster for a four-year term. **Dr. G. Preston Edwards** has been named chief of the medical staff of the Cherokee County Memorial Hospital, Gaffney. **Dr. L. L. DuBose** was named vice chief, and **Dr. John Cathcart, Jr.** is secretary-treasurer. **Dr. Thomas E. Whitaker** succeeded to the presidency of the Greenville County Medical Society in December. Named to serve with him were **Dr. Frank Stelling,** president-elect; **Dr. John Holliday,** treasurer, and **Dr. Arthur Dunlap,** secretary. **Dr. R. C. Brownlee** was retiring president.

A Spartanburg surgeon is helping make wartime medical history in the jungles of South Viet Nam. Near the Cambodian border is **Dr. William Elston,** chief of surgery in the world's only inflatable combat hospital. **Dr. Foster Marshall** of Columbia is also among those in South Viet Nam. He is practicing general surgery at Go Cong. A bronze memorial plaque was unveiled in December at the McLead Annex, Florence, honoring **Dr. Eugene C. Hood** as "doctor and humanitarian" for his 30 years of service as superintendent of the former Florence-Darlington Tuberculosis Sanatorium. The plaque was presented by **M. L. Meadows,** chairman of the Board of Trustees of the McLeod Infirmary, in behalf of the trustees.

Dr. Forde A. McIver is the new president-elect of the Charleston County Medical Society. He will succeed **Dr. Edward F. Parker,** who was installed as president, in 1966. **Dr. John C. Hawk,** outgoing president, was elected vice president; and **Dr. J. Franklin Graves** was reelected secretary-treasurer. **Dr. Philip J. Haggerty,** specialist in general surgery, has discontinued his practice in Gaffney and has begun practice in Springfield, Ill., as of January. **Dr. James H. Young,** surgeon, is heading a recently organized Civil Air Patrol unit in Anderson. **Dr. Lucius Pinckney Varn** has been named to succeed **Dr. E. Kenneth Aycock** as director of the Charleston County Health Department. A native of Branchville, Dr. Varn is currently director of the Greenville County Health Department. He is expected to assume duties in Charleston early in March. Prior to becoming director of the Greenville County Health Department, Dr. Varn directed the Orangeburg Health Department in 1959. His duties there expanded to include Bamberg and Barnwell Counties. He was in general medical practice in Orangeburg for approximately three years. Dr. Varn has a B.S. degree from Newberry College, and M.D. degree from the Medical College of South Carolina and a master's in public health from the University of North Carolina.

Dr. George Price, a general practitioner, has been named chief of staff of Mary Black Memorial Hospital, which should be in its spacious and modern new plant on Cannon's Campground Rd., Spartanburg, shortly after its completion next September. **Dr. A. K. Temples** will be chief of the Department of Surgery, assisted by **Dr. Frank Wier. Dr. R. O. Burgess** is the new chief of the Department of Medicine, with **Dr. F. Larry Gant** as assistant. **Dr. William Bonner** will head the Department of General Practice, assisted by **Dr. Robert Taylor;** and **Dr. John Boniface** will be chief of the Radiology Department. **Dr. Rexford H. Hunt,** a native of Congaree, S. C., will practice General and Thoracic Surgery in Lancaster. Dr. Hunt received a B.S. degree from the University of South Carolina in 1950 and the M.D. degree from the Medical College of South Carolina in 1954. He served his internship at Temple University Hospital, Philadelphia, and was a resident in General and Thoracic Surgery at the Temple University Hospital from 1955-59. While there, he was a Clinical Fellow of the American Cancer Society, and a Diplomate Chevalier Jackson Post, graduate course in Bronchoesophagology. He also served two years of active duty in the Medical Corps of the U. S. Naval Reserve. While in the Navy, Dr. Hunt was a member of the surgical staff at the U. S. Naval Hospital in Portsmouth and the National Naval Medical Center at Bethesda. **Dr. James T. Wiggins** announced the opening of his office Jan. 3 for the practice of pediatrics at the Sunset Medical Court in West Columbia. Dr. Wiggins is a native of Union County. He graduated from Wofford College with a B.S. in chemistry. After earning his M.D. at the Medical College of South Carolina, he served internship at Spartanburg General Hospital. He completed his residency in pediatrics at Columbia Hospital. In addition to his practice, Dr. Wiggins will be the director of Staff Pediatrics at the Columbia Hospital.

Dr. Walton L. Ector, Dr. William B. Gamble, Jr. and **Dr. Jack W. Rhodes** announce the association of **Dr. LeRoy C. Mims** in the practice of pediatrics, Parkwood Professional Building, Charleston, S. C.

THE DOCTOR DRAFT IN S. C.

Information received indicates that the Doctor Draft call for this summer will be approximately 2000 Doctors. If previous percentages hold true, this will mean that about 1½%, or between 25 and 30 will come from South Carolina. The last call was filled with 17 men from South Carolina.

This summers call will be filled, first from the Intern class finishing in June 1, 1967. If enough men cannot be found in this group of Interns, then they will reach into the Residents and men in private practice. The men from these two latter classifications, will be called, youngest first.

Records at State Selective Service Headquarters seem to indicate somewhere between 15 and 20 men can be obtained from the Intern Group; the others will come from the Resident and in-practice group.

While we have no way of knowing at this time just what age group will be reached, we might make a guess that it will reach the 32 and perhaps the 33 year old group.

Frank Owens, Chr.
Medical Advisory Committee to Sel. Ser.

PHYSICIANS WANTED

Full time industrial physicians for permanent employment in DuPont Company plants. Excellent opportunity. General practitioner preferred. Salary open. Immediate opening at May Plant in Camden, S. C. Please write to: G. W. Hammon, Personnel Section, E. I. DuPont de Nemours & Co., Inc., Drawer "A", Camden, S. C. 29020.

Equal opportunity employer.

Governor Robert McNair announced in January a $193,334 grant for a mental health center at Greenville under the Appalachian Regional Program.

The funds are subject to final approval by the Departments of Commerce and Health, Education and Welfare.

The proposed facility will have 60 beds and space for outpatient treatment.

The center will serve nearby counties in North Carolina, Georgia and Tennessee as well as the Apppalachian portion of South Carolina.

* * *

Ethel Marie Bailey Bollinger, certificate number 11,984, registered nurse in South Carolina, had her license suspended as of Oct. 19, 1966. The license of Ruth Elzaina Cobb Ridley, certificate number R10,943, registered nurse in South Carolina, was revoked as of Sept. 7, 1966. This action was taken by the State Board of Nursing for South Carolina.

Associate Medical Director, Full-Time, Interested in Preventive Medicine for Large Corporation in Winston-Salem, North Carolina. Generalist, Internal Medicine or Occupational Health Background Preferred. Desirable Age 30 to 45. Salary Commensurate With Experience. Reply Box 1, South Carolina Medical Association, 113 North Coit Street, Florence, S. C. 29501.

MEDICAL COLLEGE OF SOUTH CAROLINA

Governor Robert E. McNair and Dr. William M. McCord, president of the Medical College of South Carolina, announced jointly on December 2 the approval by the Department of Health, Education, and Welfare of an $8.25 million construction grant which will provide for major expansion of the Medical College.

Added to the $6 million already approved by the State of South Carolina, the Medical College was assured it would be able to proceed with the construction of the basic sciences - library - dental school building and an administrative building. The buildings will be located on the property north of Doughty Street obtained from Porter Military Academy.

The architectural firm of Lyles, Bissett, Carlisle and Wolff of Columbia has been given the go-ahead to complete detailed plans so that bids may be called for during this summer. The net new construction square footage is 231,887.

With the approval of the grant the School of Dentistry at the Medical College will now definitely accept its first class of 24 students this coming fall.

A sixth school of academic instruction has been organized at the Medical College. Dr. George F. Stevenson, who joined the faculty as Professor of Clinical Pathology in August, 1965, has been named acting director of the new school and director of its Department of Medical Technology.

Establishment of the school is based on the need in South Carolina for more study opportunities in allied health specialties, an area in which pressing personnel shortages are being experienced throughout the country. Dr. Stevenson praised the efforts of Governor McNair and John K. Cauthen, Chairman of the Advisory Commission on Higher Education, in assisting to establish the new School of Allied Health Sciences. It is the 12th such school in the country.

A new program to train Certified Laboratory Assistants was offered for the first time at the Medical College early this year. The program is the first course of instruction initiated under the recently established School of Allied Health Sciences.

A grant in the amount of $69,906 for a one-year program has been awarded to support planning activities for the development of a Regional Medical Program to improve the level of diagnosis and treatment of heart disease, cancer, stroke and related disease in the South Carolina region.

With Headquarters at the Medical College, the program will be coordinated by Dr. Charles P. Summerall III, Associate in Medicine, in cooperation with a Regional Advisory Committee broadly representative of the health resources of the entire state.

John E. Wise, formerly of Lexington, Kentucky, has been named Second Vice-President and Comptroller of the Medical College. Prior to his appointment, Wise was the Executive Assistant to the Vice President for Research and Executive Director of the University of Kentucky Research Foundation.

As Vice President and Comptroller, Wise will have immediate oversight of the financial operations of the Medical College, its hospital and clinics, and responsibility for all physical facilities.

Dr. W. Curtis Worthington, Jr., Professor of Anatomy, has been named Assistant Dean for Curriculum in the School of Medicine of the Medical College. The appointment was effective December 1.

Dr. William C. Westphal, Jr., former Associate Professor in the Department of Pediatrics at the Medical School of State University of New York at Buffalo, has been named Professor and Chairman of the Department of Pediatrics effective February 1.

A native of Philadelphia, Dr. Westphal attended Swarthmore College and was graduated from Yale University in 1947. He received his M.D. degree from the Medical School of the University of Pennsylvania in 1951. In 1951 and 1952 he was an intern at the Hospital of the University of Pennsylvania and received his residency training at Children's Hospital of Philadelphia from 1954 to 1957. Dr. Westphal was on the staffs of Children's Hospital of Philadelphia and Pennsylvania Hospital and a member of the Medical School of the University of Pennsylvania faculty from 1957 to 1961, when he joined the faculty of the Medical School of State University of New York at Buffalo.

Dr. William W. Vallotton, Professor of Ophthalmology, has been named Chairman of the Department of Ophthalmology, effective December 9.

Dr. Julian R. Youmans has been named Professor and Chairman of the Department of Neurosurgery at the University of California School of Medicine at Davis. The announcement by Dr. William M. McCord, President of the Medical College, said, "We are truly sorry that Dr. Youmans is leaving us, but at the same time we are complimented that he has been chosen to head a department in such a fine institution as the University of California. Dr. Youmans' resignation becomes effective August 1, 1967.

Nearly 80 alumni of the Medical College have already made contributions totaling more than $2,500 to the Alumni Professorial Chair Endowment Fund of the Health Sciences Foundation of the Medical College of South Carolina. Graduates of the School of Medicine are leading the list of contributors with 64 gifts. Nine nursing alumnae have contributed to the fund, and three pharmacists.

It is hoped that all physicians, nurses, and pharmacists in South Carolina will participate in this plan which will greatly strengthen the teaching of the health sciences at the Medical College. The plan will provide partial support for two faculty positions. These Alumni Professors will be able to devote increased time to teaching and research providing an enriched educational environment for Medical College students.

The Medical College and Clemson University are adding a new dimension to their educational development with the creation of a joint program in biomedical engineering. Plans for the cooperative program were announced by presidents of the two institutions, Dr. William M. McCord of the Medical College and Dr. Robert C. Edwards of Clemson.

The program's overall objective is to develop a pool of scientists from engineering, medicine, and the life sciences who will direct research and offer course work in biomedical engineering.

Initial phases of the program will include seminars conducted by faculty members of both institutions and an exchange of graduate students in Clemson's College of Engineering and Medical College students during the 1967 summer sessions. The program also calls for a Clemson faculty member who has done work in the biomedical area to spend one or two months at the Medical College to accelerate the process of defining common research areas.

The American Academy of Pediatrics will hold postgraduate course four on March 9, 10, 11 at the University of Tennessee College of Medicine and the Le Bonheur Children's Hospital in Memphis, Tenn. The course is entitled "Difficult Problems in Clinical Pediatrics—Diagnosis and Management."

A program on Acquired Valvular and Congenital Heart Diseases will be presented by the Medical College of Georgia, the Medical Association of Georgia and the Georgia Academy of General Practice March 1-3 in Augusta, Ga.

A MINORITY REPORT

(ON PART-TIME TEACHING)

Lawrence A. Kohn, M. D.

The teaching of clinical medicine in America is rapidly becoming "full-time." This is not because part-time physicians are no longer willing to teach, but because it is apparently assumed that full-time men have greater capacity for teaching "the medicine of tomorrow,"[1] and also because greatly enlarged full-time staffs need experience in "general" medicine to supplement their special interests, and are often allowed to displace part-time teachers from the schedule. These full-time teachers are generally only "geographically" so, since they have found it possible to accept patient fees, disregarding the threat to their teaching and research this was once thought to present. A recent series of articles on The Training of the Physician, in the *New England Journal of Medicine*,[2, 3] has underscored the prevalent attitude. While admittedly there should be a place in teaching for the practicing physician,[4] its locus and his importance, even in community hospitals[1] are nebulous and one senses the feeling by the writers, largely department chairmen, that the sooner the shift is completed and we are over with this dirty business, the better for all.

Objection to this attitude is not new, and interestingly has been voiced from both sides of the fence.[5, 6] Some of us, chiefly outsiders, maintain our dissent, of which this is an outline. The tide, like any other, might turn of itself, but this is currently improbable, since full-time staff are unlikely to release the control of teaching voluntarily and all the foreseeable changes in medical practice will solidify their position.

This does not *per se* make it desirable that clinical teaching should be exclusively full-time, nor are the results to date entirely happy. There is already some loss of empathy, even reaching antagonism, between full- and part-time teachers, which is disadvantageous. Patients may suffer. When teaching is done on private floors, and this teaching is essential for students and house staff, there can be interference with patient care and after-care, since house staff, knowing on which side their promotional bread is buttered, are prone to turn for opinion to full-time staff members, disregarding or even degrading the ability and judgment of the attending physician. "As long as the upper echelon of the department (of medicine) looks down on empirical medicine, the students will accept this opinion."[7]

It is illogical to assign clinical teaching exclusively to full-time men in university or any other hospitals. Just as biochemistry and pathology are best learned from those who work actively in these fields, so the introduction to the study of disease in man is best done by physicians completely occupied in the subject. Burwell said: "Full-time teachers not engaged in active practice cannot by themselves impart to students in adequate interpretation of the problems of medicine."[6] Practitioners have many positive assets as teachers, and when these are ignored, students will be the losers, as ably pointed out by Levine.[6] First, they have usually developed what may be called three-dimensional knowledge of disease. The value of observation in length need not be stressed, and although any one individual's experience may be skewed, it is better than the results of questionnaires. Observation in breadth is likewise learned best in practice: the economic and social settings of disease are obvious to the practitioner, as is the need of reducing environmental pressures in situations of stress. This is invaluable experience to be passed along. Even the practicing physician with knowledge and interest in a special field needs to know who his patients are and where they fit in society. He *is* the social worker; he is often the padre as well. The third dimension, thickness, must be taken figuratively, although one at times observes frustration of house staff when dealing with an inferior I.Q. in a fifty dollar room. Private practice teaches one to vary one's approach to fit the patient, using authority, sharing, and other technics. Such a change of pace is rarely familiar to full-time men.

Second, much of private practice is preventive medicine. This includes insistence on immunizations, instruction of patients in that much-neglected topic, simple hygiene: food, drink, exercise and measures to prevent the spread of infection, the last, attention to remediable areas of emotional pressure, not merely dynamic formulations.

Third, full-time teachers seem relatively complacent at the rocketing cost of hospitalization. It is all very well for hospital directors and trustees to brush this off on the basis of the forty-hour week and open-heart surgery; it is also the result of over-staffing, from house staff to janitors, and of enormous waste of x-rays and laboratory work. Practitioners, who know the impact on patients of huge bills, are far more likely to discourage repeated electrolyte studies in uncomplicated surgery or serum electrophoresis on every medical admission. When this type of waste is prevalent, it is an injustice to house staff training, and persistent resistance by full-time men is not conspicuous. In one great teaching hospital,[8] the house staff on private floors are permitted to perform as "educationally indicated," investigation which has been deemed needless or unwise by attendings, without the cost landing on the patient, but with considerable potential damage to the doctor-patient relation. A hospital director recently observed[9] that whereas a thousand-room hotel runs on a thousand employees, the thousand-bed hospital needs four times that number. The word "needs" could well be challenged. Of the five major Rochester hospitals, none has a committee studying hospital costs. Two claim an effort to hold them down; the others acknowledge the problem but appear to be stymied.[11]

Finally, there are physician-patient values not learned while on full-time which may be lumped under the term "responsibility." Young has emphasized that the internist or pediatrician should be prepared to be a "Personal Physician," one willing to take charge.[10] This is an essential role, and patients know who is ready to play it. In 1963, at the University of Rochester School of Medicine and Dentistry, a survey was made of the choice of personal physician by the senior full-time staff. Of those who were asked and (anonymously) answered, 70 per cent had picked a member of the part-time staff.[12] This could have been anticipated: never having learned how to be a doctor, how could full-time men expect to be chosen for the part, much less to teach it?

Teaching ability is not merely possession of information; it is a special skill and it is sometimes given to men ignorant of enzyme systems or genetics. Had clinical instruction in the past been restricted to full-time men, we might have missed among others Thayer, Hamman, Herrick, Joslin, Minot and Levine. Successors to these superb teachers should be sought and encouraged.

The fault is not all on one side, to be sure. There are well-trained men starting their practice who appear unwilling to take time to help in teaching physical diagnosis or in the out-patient department, although many brilliant physicians made their mark in these areas. On the other hand, in such a carefully planned program as that at the University of Rochester's "Combined Clinic," there has been no difficulty in enlisting part-time physicians, seniors as well as juniors, to work with students. In this system, one fourth-year student and one physician follow their own patients in a special "general" out-patient department for half an academic year.[13] Some of these men come long distances to meet their appointments and most of them are enthusiastic about the resulting-patient-doctor relationship.

If part-time teaching is to be encouraged, a change in attitude on both sides might bring considerable return. The stigma of second-class citizenship should be lifted from part-time men; asterisks in the catalogue "denoting part-time," or the adjective "clinical" attached to rank are really reflections of full-time insecurity, and though minor, are irritating, especially since full-time is often only a geographical term. Competent part-time men could well have a voice on the governing bodies of medical schools and assignment to committees consistent with their rank and interests. Some reward could be provided for teaching besides bed privileges (which is often curtailed when shortages develop). Token pay would add little to departmental budgets, would provide Social Security benefits otherwise unavailable, and has in the past given the recipients a strong sense of belonging.

Another side of the problem is to try to complete the education of prospective full-time teachers and investigators by making extra-mural experience a part of their training. "In my opinion, the full-time teacher of clinical medicine should be trained as broadly as the future practitioner."[10] Promising men might be encouraged, after their residencies, to take two years' service with superior clinical groups not based in teaching institutions. As Dr. Nolan Kaltreider[14] points out, there are not enough such groups, but there are some where high-caliber youngsters would be welcomed. This would avoid forcing the latter to cast a premature die for practice, which usually demands an enormous commitment in debt, and would at the same time support them adequately for these truly educational years. The decision to return to full-time or stay extra-mural would be one of choice, not of necessity.

In summary, the process of displacing part-time by full-time teachers at the clinical level in medical schools is poor for departmental morale and may interfere with the best in patient care. It will eventually lose for students a vast experience of medicine unfamiliar to full-time staff, and eliminate as a model the extra-mural practitioner, who has made contributions to teaching in the past and still has them to make.

Reprinted with permission of the author and the editor from *The Pharos* 29:67 (July 1966).

References on request.

New Pharmaceutical Specialties

by Paul De Haen

For detailed information regarding indications, dosage, contraindications and adverse reactions, refer to the manufacturer's package insert or brochure.

Single Chemicals—Drugs not previously known, including new salts.

Duplicate Single Products—Drugs marketed by more than one manufacturer.

Combination Products—Consisting of two or more active ingredients.

New Dosage Forms—Of a previously introduced product.

NEW SINGLE CHEMICALS

LEVOPROME

Analgesic—non-narcotic. Rx

Manufacturer: Lederle Laboratories

Nonproprietary Name: Methotrimeprazine

Indications: Relief of pain associated with chronic diseases such as arthritis and cancer, other acute pain, obstetrical analgesia, pre- and postoperative analgesia.

Contraindications: Concurrently with antihypertensive drugs, phenothiazine hypersensitivity, overdosage of CNS depressants or comatose states, concomitantly with barbiturates, overt or incipient obstructive uropathy, severe cardiac or hepatic disease, clinically significant hypotension, and in children under 14 years of age.

Dosage: i.m.—10 to 30 mg every 4 to 6 hours.

Supplied: 1 ml ampuls; 10 and 30 ml vials.

DUPLICATE SINGLE PRODUCTS

ESOPHOTRAST Esophageal Cream

Diagnostic—Contrast Media. Rx

Manufacturer: Barnes-Hind Pharmaceuticals

Nonproprietary Name: Barium sulfate

Indications: Radiologic examinations of the esophagus.

Dosage: As required.

Supplied: Not stated.

FUL-GLO Sterile Ophthalmic Strips

Diagnostic—Other. Rx

Manufacturer: Barnes-Hind Pharmaceuticals

Nonproprietary Name: Sodium fluorescein

Indications: For staining the anterior segment of the eye when fitting contact lenses, in disclosing corneal injury, and in applanation tonometry.

Dosage: A touch on the conjunctiva or fornix with the moistened tip, as required.

Supplied: As strips containing 0.6 mg. Boxes of 100.

PERKe ONE

Antiobesity Prep.—Amphetamine. Rx

Manufacturer: B. F. Ascher & Co.

Nonproprietary Name: Dextroamphetamine sulfate

Indications: In mild depressive states characterized by apathy, lethargy and psychomotor retardation, orthostatic hypotension, narcolepsy and non-arteriosclerotic parkinsonism, adjunct in weight reduction and alcoholism.

Contraindications: Hypertension, advanced coronary artery disease, hyperthyroidism, hyperexcitability, involutional melancholia or agitated depressions.

Dosage: One capsule, taken in the morning.

Supplied: In bottles of 100 and 500 red/clear capsules.

COMBINATION PRODUCTS

AASQUEL Tablets

Antispasmodic. Rx

Manufacturer: Brown Pharmaceutical Co.

Composition:

Hyosciamine sulfate	0.1075 mg
Atropine sulfate	0.0195 mg
Hyoscine hydrobromide	0.0070 mg
Phenobarbital (1/4 gr)	16.2 mg

Indications: Nausea, vomiting, gastritis, gastrointestinal spasms, hyperacidity, ulcerative colitis, chronic cholecystitis, frequency of urination, nocturnal enuresis, mild hypertension, motion sickness.

Contraindications: Glaucoma, advanced hepatic or renal disease, or hypersensitivity to one of the components.

Dosage: One or two tablets 3 or 4 times daily.

Supplied: In bottles of 100 and 1000 tablets.

C-RON TC

Hematinic Vitamin Combination. o-t-c

Manufacturer: Rowell Laboratories, Inc.

Composition:

Ferrous fumarate	100 mg
Ascorbic acid	300 mg

Indications: Iron deficiency anemia, and prophylaxis against iron deficiency anemia of pregnancy.

Dosage: Two to six tablets daily.

Supplied: In bottles of 100, 1000 and 5000.

PERKe TWO

Antiobesity Prep.—Amphetamine. Rx
Manufacturer: B. F. Ascher & Co.
Composition:

Dextroamphetamine sulfate	15 mg
Amobarbital	60 mg

Indications: In mild depressive states characterized by apathy, lethargy and psychomotor retardation, orthostatic hypotension, narcolepsy and non-arteriosclerotic parkinsonism, adjunct in weight reduction and alcoholism.

Contraindications: Hypertension, advanced coronary artery disease, hyperthyroidism, hyperexcitability, involutional melancholia or agitated depressions.

Dosage: One capsule, taken in the morning.

Supplied: In bottles of 100 and 500 red/yellow capsules.

PERKe THREE

Antiobesity Prep.-Amphetamine. Rx
Manufacturer: B. F. Ascher & Co.
Composition:

Amphetamine sulfate	15 mg
Thyroid	195 mg
Atropine sulfate	0.36 mg
Aloin	16 mg
Phenobarbital	16 mg

Indications: Adjunct in the dietary treatment of obesity.

Contraindications: Agitated prepsychotic states, anxiety states, hyperexcitability, undue restlessness, parkinsonism, pyloric obstruction, prostatic hypertrophy, intolerance to anticholinergic drugs, nephrosis, adrenal insufficiency, hypopituitarism or hypogonadism, nausea or vomiting.

Dosage: One capsule, taken in the morning.

Supplied: In bottles of 100 and 500 red/pink capsules.

RHINSPEC

Cold Preparation—General. o-t-c
Manufacturer: Lemmon Pharmacal Co.
Composition:

Acetaminophen	300 mg
Glyceryl guaiacolate	100 mg
Phenylephrine HC1	5 mg

Indications: To facilitate productive cough and to relieve nasal congestion and aches and pain associated with the common cold.

Contraindications: Not for children under 3 years of age; persons with hypertension, heart disease, diabetes, thyroid disease, or high fever and persistant cough should use it only as directed by physician.

Dosage:
Adults—1 or 2 tablets 3 or 4 times daily
Children, 6 to 12 years—1 tablet 3 or 4 times daily
Children, 3 to 6 years—½ tablet 3 or 4 times daily

Supplied: In bottles of 100 and 1000 tablets.

NEW DOSAGE FORMS

AVC/Dienestrol Suppositories

Antiinfectives—Vaginal. Rx
Manufacturer: The National Drug Co.
Composition:
Each suppository contains:

Dienestrol	0.70 mg
Sulfanilamide	1.05 Gm
Aminacrine HC1	14.0 mg
Allantoin	140.0 mg

Indications: For atrophic vaginitis complicated by nonspecific mild to moderate infection in late menopause or post-menopausal women; to relieve or eliminate symptoms such as pruritus, burning, leukorrhea, dyspareunia, dysuria, if from urine over inflamed tissue.

Contraindications: Not to be used by patients sensitive to sulfonamides, with, or a history of, breast or genital tract carcinoma, or depressed liver function.

Dosage: Average dose: 1 suppository intravaginally once or twice daily.

Supplied: In boxes of 12 suppositories with applicator.

OMNIPEN

Antiinfectives—Penicillin. Rx
Manufacturer: Wyeth Laboratories
Nonproprietary Name: Ampicillin

Indications: Urinary, respiratory, and gastrointestinal tract infections caused by: Shigella, Salmonella, E. coli, H. influenzae, P. mirabilis, Beta-Haemolytic streptococcus, nonpenicillinase-producing Staphylococcus aureus, Diplococcus pneumoniae, and Streptococcus fecalis and viridans.

Contraindications: Hypersensitivity to penicillin and in infections caused by penicillinase-producing bacteria.

Dosage:
Adults—250 to 500 mg q6h.
Children—(under 13 years)—100 to 200 mg/Kg/day in divided doses every 6 or 8 hours. The total dose should not exceed the recommended adult dose.

Supplied: Suspension—Bottles containing 4 Gm or 2 Gm to be mixed with water to make 80 ml.

RONDOMYCIN Syrup

Antibiotic—B & M Spectrum. Rx
Manufacturer: Pfizer Laboratories

Nonproprietary Name: Methacycline HCl

Indications: Infections caused by susceptible strains of Gram-positive and Gram-negative organisms: pneumonia, respiratory tract, genito-urinary tract, soft tissue, ophthalmic, and gastrointestinal infections.

Contraindications: Reduce dosage in renal impairment.

Dosage:

Adults: 600 mg daily, in divided doses.

Children: 3 to 6 mg/lb. body weight, daily, in divided doses.

Supplied: In 2 oz. and 16 oz. bottles.

AMA Education and Research Foundation

For the past four and a half years, the AMA Education and Research Foundation has been operating a program which guarantees bank loans to those in medical training. More than 30,000 loans, over $35,000,000 in principal amount have been made to borrowers who needed additional funds for essential living and training expenses.

We are proud of the fact that no legitimate request for loan funds has been turned down. We feel that this program has played an important part in helping young people overcome financial obstacles which otherwise may have proved insurmountable.

During the past year the availability of money for loans of all kinds has declined sharply. Many economists have tried to pinpoint the cause of the shortage of credit. The consensus is that the economy cannot absorb the combined impact of a large domestic welfare program and a war.

This combination of economic pressures has created a shortage of money, and has forced the banking system to raise the cost of funds (interest rates) and curtail lending. Because of this general curtailment of loans, two of the three banks in the AMA-ERF Loan Guarantee Program have terminated their agreements to loan money through the program. The third bank, Continental Illinois National Bank of Chicago, has stated that it must limit aggregate new loans to the amount being repaid on outstanding loans.

It is therefore with sincere regret that the AMA-ERF Board of Directors, meeting on October 28, was forced to curtail the Loan Guarantee Program for a temporary but indefinite period.

Effective November 1, loans under this program must be limited to $750 per borrower per year. This step was necessary in order to spread the limited available funds as far as possible.

In addition, the interim interest rate will be increased from 6 percent to 7 percent. The new rate reflects recent increases in the bank prime rate, now at 6 percent, and our contract with the bank requires this adjustment.

For those who wish to make application for loans, the following guidelines will apply:

1. Application material will continue to be available from deans of medical schools and hospital administrators. In addition to the normal application forms, all medical students must obtain a statement from the dean's office attesting to the student's need for the loan.
2. Application material should be sent, as at present, to the Continental Illinois National Bank and Trust Company of Chicago, the institution making loans under this program.
3. Effective November 1, 1966, applicants will be eligible to borrow $750 per year.
4. The increase in the interim interest rate will apply to new loans. It will not affect loans made previously. The payout interest rate will remain at 7 percent.

We can make no prediction as to when the program will return to its former scale. Certainly, the national credit shortage is an overriding factor and the federal government has taken only a few steps to stop the inflationary spiral behind the shortage in this election year.

We assure you that we have been making an extensive search for additional sources of credit, and this search will continue. At such time as the general economic climate improves, we are hopeful that we can restore the program to its previous level and continue to make a significant contribution to the financial peace of mind of students and physicians in training.

F. J. L. Blasingame, M. D.

The Department of Pediatrics, Emory University School of Medicine, will present a postgraduate course on Pediatric Infectious Diseases and Immunology on March 6, 7, 8 at Grady Memorial Hospital Auditorium, Atlanta.

The New Orleans Graduate Medical Assembly will hold its 30th Annual Meeting March 6, 7, 8, 9. Conference headquarters will be the Roosevelt Hotel.

Deaths

Dr. J. W. Mole

Dr. J. W. Mole, 88, Brunson physician, died October 8 in Medical College Hospital, Charleston, after a brief illness. Dr. Mole was a 1901 graduate of the Medical College of South Carolina. On June 14, 1964, the James W. Moore Chapter, Daughters of the Confederacy, honored Dr. Mole in a special ceremony and presentation of the "Cross of Military Service" for his World War I record.

Dr. O. C. Holley

Dr. O. C. Holley, 83, of Leesville, died Dec. 1 at the Baptist Hospital after several years of declining health. Dr. Holley was born in Saluda County. He attended the University of Georgia Medical School and was graduated in 1905 from Franklin Square Medical College, Baltimore. He practiced medicine for four years in Georgia, then returned to his home, where he practiced for 55 years, serving the counties of Saluda, Lexington and Newberry.

Dr. Hugh Cathcart

Dr. Hugh Cathcart, 53, former surgeon at The Citadel, died Jan. 8.

Dr. Cathcart was born Oct. 11, 1913, in Charleston, a son of the late Dr. Robert Spann Cathcart and Mrs. Catherine Morrow Cathcart.

He was graduated from The Episcopal High School in Alexandria, Va., the College of Charleston, attended the Medical College of South Carolina and was graduated from the University of Pennsylvania Medical School.

He served as a captain in the U. S. Army and was stationed in the 133 Evacuation Hospital in France during World War II. He returned to Charleston and established his office as a general practitioner. He succeeded his late father as the surgeon at The Citadel in 1949, a position which he held until several years ago. While at the military college, Dr. Cathcart held the rank of lieutenant colonel.

He was a member of the Medical Society of South Carolina, the American Medical Association, the Southern Medical Association, St. Philip's Protestant Episcopal Church and the Carolina Yacht Club.

Dr. Philip McNair

Dr. Philip Kitchings McNair, Jr., 48, prominent Aiken physician, died at the Aiken County Hospital January 5.

He was a member of the Aiken County Medical Society, the South Carolina Medical Association, the American Medical Association, the South Carolina Pediatric Society, the American Board of Pediatrics and a diplomate of the National Board of Medical Examiners.

Dr. E. A. Jamison

Dr. Elmer Alvis Jamison of Easley died January 9, 1967.

He was born May 30, 1924, in Fort Morgan, Colorado. Dr. Jamison attended The Citadel and was graduated from the Medical College of South Carolina in 1955. He served his internship at Greenville General Hospital and had been practicing in Easley for the last 12 years.

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Book Reviews

PERIPHERAL ARTERIAL DISEASE, by Wiley F. Barker, M. D., (Volume IV in the Series Major Problems in Clinical Surgery), W. B. Saunders Company, Philadelphia, 1966, Pp. 229. $8.50.

The author, who is undeniably qualified because of his active interest and work during the formative years of direct arterial repair for various obstructive processes, expresses a professional attitude toward possible avenues of treatment founded on the basic principles of anatomy, physiology, pathology, and his accumulative surgical experiences. This rare collection of facts organizes the entire field of peripheral artery disease into a readily comprehensible summary of, not only the most accurate overall survey, but the best modes of treatment to date. Reading this monograph of 218 pages (minus references) is a source of delight for those vitally interested in the subject, and is a "must" for those who are in training or who treat the vascular disorders in their daily medical practices.

J. Manly Stallworth, M. D.

EMERGENCY CARE, by the Committee on Trauma, American College of Surgeons. Edited by Robert H. Kennedy, M. D. Published by W. B. Sanders Co.

This five by seven inch soft back manual for emergency care is comprehensive and well written. It is printed in a manner which makes reading easy and the contents are well indexed for easy reference.

It is a manual in which all physicians will find information in review and would seem to be of great value to those who drive ambulances and police cars, or those who are called on at any time to see emergency cases.

It covers a wide bracket of conditions and instructions as to airways and to treatment in case of cardiac arrest and the handling of drowning victims and instructions in oxygen inhalation and suction, shock and etc. The subjects are concisely and understandably written.

One interesting chapter is on the instruction of drivers of emergency vehicles, as to the control of speed and the removal of sirens and other noise makers, which have a tendency to make the driver hysterical and incapable of driving safely.

In this era of tremendous increase in accidents and the ever present potential of mass casualty, this book is recommended for reading, and should be of value to medical students as well as to nonprofessional attendants on those who are injured.

I. Grier Linton, M. D.

FAMILY PLANNING, by Consumers Union. 2nd Edition. Consumers Union of U. S., Inc. Mount Vernon, N. Y. 1966. Pp. 191. Price $1.75.

This is a most informative book produced with the help of Alan F. Guttmacher, M. D., President of the Planned Parenthood Federation, A. J. Sobrero, M. D., Director of the Margaret Sanger Research Bureau, and Rael Jean Issac, author of "Adopting a Child Today." Written in a clear-cut and easily readable manner, it is developed around the main themes of *contraception, improving fertility,* and *adoption.* The final chapter, "Where to go for Help," contains excellent directories of planned parenthood committees and adoption organizations. This chapter would be of value to the physician. Chapter I through III would be of tremendous help to patients. The book is well worth the price.

J. Richard Sosnowski, M. D.

SYNOPSIS OF DERMATOLOGY. Wm. D. Stewart, Julius L. Danto, and Stuart Maddin, C. V. Mosby Company, St. Louis, September 1966. Price: $10.85.

This is a manual in size and arrangement of content. Information is easy to find—brief of description—therefore excellent for quick reference for the busy practicing physician. Unlike many other texts for general use it is not limited to the most common skin diseases but includes a wider variety which adds much to its value. Pictures on a whole are excellent except many are too closeup and give no perspective as to location or dimension. Recommended as a choice dermatology manual for the practicing physician.

Kathleen Riley, M. D.

OBSTETRICS AND GYNECOLOGY, (Third Edition). J. Robert Willson, Clayton T. Beecham & Elsie Reid Carrington. The C. V. Mosby Co., Saint Louis, 1966. About $15.00.

This volume is another example of the trend toward combining the two disciplines in a compact form, as a text for students and a reference for physicians who do not practice obstetrics and gynecology or who do so in general practice.

It is a good book of its kind. It is quite complete.

The obstetric section is excellent, the gynecologic conservative. Unusual are the sections on female psychology and contraception, very welcome additions to the standard texts. The portions dealing with endocrinology and infertility can be classed as fair, the specific area on amenorrhea unusually good. The sections on cytology and chromosomal studies are poor.

The reviewer is pleased with this edition, although he is still partial to the more detailed classics such as Williams and Crossen.

J. M. Wilson, M. D.

QUESTIONS AND ANSWERS IN ORTHOPAEDICS—For Students, Interns, Residents and Board Aspirants. By F. G. Goodman and G. R. Schoedinger. The C. V. Mosby Company, St. Louis. 1966. Pp. 244. Price $9.85.

This book is a compilation of questions giving the answers and references primarily aimed at students, interns and orthopaedic residents and board aspirants. The questions are certainly thought provoking and if the book is used properly should be of considerable value, more however to the orthopaedic resident than the medical student or intern.

Since the book was aimed at the orthopaedic residents, I felt that criticism by one in training would be appropros. As a result, I requested an opinion by the chief orthopaedic resident in the Medical College of South Carolina training program. I found that a copy of the book was already in use by the resident staff.

The following is a review of Dr. E. L. Hay, chief orthopaedic resident:

"This book consists of over 1400 questions and answers dealing with 11 major areas which correspond to the topics covered in the American Academy of Orthopaedic Surgeons in training examinations. The references from which the questions were taken are listed. These 90 references provide the basis for a rather comprehensive review of orthopaedic surgery. The book, if properly used, is of value in pointing out deficiencies in one's knowledge and stimulating further reading. If the references are not sought out and studied by the reader, the book will be of little help. It is felt that the authors would have done well to broaden the scope of many of the questions and reduce the number of questions."

B. L. Freeman, Jr., M. D.

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winter 1966

DORSEY Season

A journal within a journal published quarterly in the interests of better medicine by Dorsey Laboratories, a division of The Wander Company, Lincoln, Nebraska. Address communications to Raymond C. Pogge, M.D., Director of Medicine.

this issue: the nose as a shock organ

the nose as a shock organ

by Charles J. Shagoury, M.D., Chelmsford, Massachusetts

"Is it a cold, hay fever, or has he been reprimanded by his boss?" Occasionally, you will ask yourself this question when confronted by a patient with abrupt onset of rhinorrhea, nasal obstruction, and sneezing. Usually the history will elucidate the problem, but examination of the nose will often provide valuable clues to the correct diagnosis.

The nose is a shock organ in a double sense. First, it is in the nose that the confrontation takes place with the surrounding atmosphere. For twenty-four hours a day, the nose must meet the varying challenges of the inspired air, containing perhaps noxious chemicals, dust, dirt, bacteria, viruses, fungi, and industrial pollutants of all kinds, and render it clean, virtually sterile, and fit for the sensitive alveoli of the lungs. Whatever the temperature or humidity of the atmosphere, the nose must transmit it to the lungs at approximately 98°F, and with a humidity of approximately 40%.[1]

Second, in particularly susceptible patients, the nose acts as a shock organ in a manner totally unrelated to its normal function. Persons with hay fever respond to ordinarily harmless materials by extreme nasal congestion, with marked rhinorrhea and violent spasms of sneezing. In some patients, exposure to threatening or disagreeable agents, or situations involving mental conflict may result in a reaction which is exclusively nasal, with swelling of the turbinates, and marked hypersecretion.[2]

Nasal symptoms usually result when the nose seeks to perform its function of getting rid of noxious and dangerous elements in the atmosphere, and prevent their admission to the trachea and lungs. Small particles are removed by the mucous coating which blankets the nasal passages. This mucous blanket contains a bacteriostatic agent, lysozyme, which destroys most air-borne bacteria.[3] The mucinous content renders the surface sticky, causing dusts and small particles to adhere. It has been postulated that this process is rendered more effective through adsorption because of a surface electrical charge on the nasal mucosa.[4] The cilia then sweep the particulate matter to the pharynx. The nose can prevent entrance into the lungs of particles as small as three microns in diameter, but smaller particles elude the nasal barrier. Most bacteria causing respiratory infections are one to three microns in diameter, but since they usually are inhaled in clumps, they are efficiently removed as a rule. Viruses, which are of the order of 1/1000 of this size, are less efficiently dealt with, unless they occur in very large aggregates.[5]

The nose will react in a more or less similar manner, whatever the nature of the offending agent, whether it be an irritant chemical, virus, pollen, or distasteful emotional situation. In acute coryza, the most characteristic sign is a profuse watery discharge. The volume of secretion may rise from practically nothing to nearly 60cc in twenty-four hours.[6] The mucous membrane is reddened and engorged, while the turbinates are markedly swollen. After the first day or two, the secretion becomes thicker, yellowish, and more difficult to expel. The surface cells are largely destroyed, contributing to the copious discharge, which now also contains numerous inflammatory cells which have migrated to the area. Gradually, over a period of a few days, or a week, the flood abates, the swelling and redness subside, and the nasal epithelium resumes a healthy appearance.

Repeated attacks of rhinitis, particularly if there is an underlying element of obstruction, may result in chronic rhinitis. The mucous membrane is constantly swollen and reddened. Sticky, mucopurulent secretions are a continuous feature, and the glandular elements are hypertrophied. Commonly, the mucosal surface takes on an irregular, rounded "mulberry" appearance, and nasal passages are occluded by the swollen turbinates and redundant mucosa.

While all of us are susceptible to colds, the victim of hay fever, or allergic rhinitis, displays a marked nasal reaction to materials in the air which leave his associates unaffected. In such a patient, the nasal mucosa has become an allergic "shock" organ. Contact with the nasal allergen causes local release of histamine, with vasodilatation, increased vascular permeability, and severe nasal congestion, similar to the "wheal" and "flare" reactions in the skin, when the epidermis is the allergic shock organ. While we eagerly await the coming of spring, the hay fever sufferer dreads the blooming season, whose invisible pollens are poisons to his sensitive nose. His neighbor's cat or dog may provoke paroxysms of uncontrollable sneezing. In some cases a specific allergen is not identified, but the triad of rhinorrhea, nasal obstruction, and sneezing is present.[7] The nose in these cases shows a pale, boggy, edematous mucosa, with a thin mucoid secretion. The mucous membrane shows extreme retractility to 1% cocaine or ephedrine. If the patient has medicated himself prior to examination, the nasal passages may appear abnormally patent, or show exaggerated congestion due to rebound reaction. The secretion may show a large number of eosinophils particularly after an attack of sneezing or rhinorrhea. Touching the mucosal surface, especially of the inferior turbinate, leaves an indentation, showing that the swelling is due to stasis and edema, rather than actual hyperplasia of the mucous membrane as in chronic hypertrophic rhinitis. Though the pale swollen mucosa is the hallmark of allergic rhinitis, as usually seen by the physician, exposure of allergic subjects to their known allergens results in a brief hyperemic phase, followed by pallor and edema.[8]

In the later stages of allergic rhinitis, the chronic edema of the mucous membrane results in the formation of polyps, clusters of grape-like masses hanging from the roof of the nose, with a pale glistening surface, contributing significantly to the sense of nasal obstruction and oppression.

A large group of patients show symptoms of nasal congestion when confronted by adverse life situations.[9] In these unfortunate persons, anxiety, frustration, and resentment are often accompanied by a runny nose and nasal obstruction. Lacrimation adds to the nasal stuffiness. This autonomic response, mediated by the parasympathetic nervous system, may be part of a general parasympathetic reaction, or may possibly represent in part, a symbolic effort to wash out and crowd out the offending situation. Nasal congestion may also occur in some patients at times of sexual stimulation, and in women during menstruation and pregnancy, even to the point of epistaxis.[10] The relationship is obscure; castration results in atrophy of the nasal glands, and their action is inhibited by the hormones of the hypophysis and the thyroid.[11] The nose may be the shock organ in drug therapy. The nose may also bear the brunt of industrial stress, in those who work in a hot dry atmosphere, or those exposed to acid fumes, or irritating dusts. As the air in our cities is increasingly polluted by exhaust fumes, and industrial irritants, whole urban populations may suffer from chronic nasal and respiratory symptoms.

Of course, nasal reactions are not just infectious, or allergic, or emotional. Particularly in the chronic sufferers, there is an interdependence of all three. Death of a relative, or other psychic shock can pre-

(concluded on following page)

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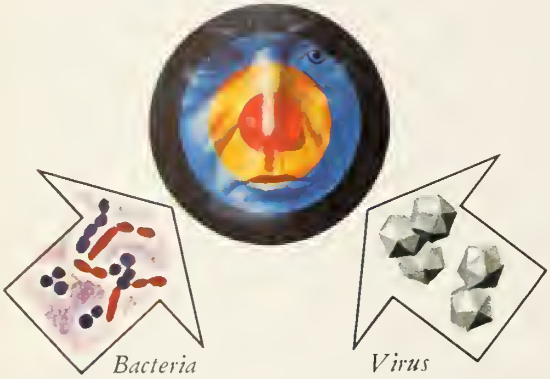
cipitate an attack of rhinorrhea in hay fever sufferers.[12] Others develop attacks of vasomotor rhinitis following change in temperature, chilling, or exposure to the sun, or simply warm bedclothes.



The complex interplay of allergy and infection is largely unclear. Allergy to the viruses and bacteria which cause infection has been postulated, but is difficult to demonstrate. The swollen obstructed allergic nose is more susceptible to infection. At the same time, infection often precedes or precipitates an allergic attack. Exposure of a susceptible patient to an allergen can activate latent virus organisms leading to infection.[13] This "jolt" reaction represents a summation of an allergen and a virus leading to symptoms in the nose as a shock organ, which neither could have produced alone. In childhood, repeated attacks of bronchitis and colds may be inflammatory reactions to an allergen, or precipitated by exposure to an allergen. These children may later develop typical allergic rhinitis. On the other hand, children with typical allergic histories, eczema, asthma, and allergic familial backgrounds, may later develop typical infectious rhinopathies. Skin tests in such patients are usually positive.

Nasal reactions are part of the systemic response of the patient to an unwelcome stimulus. In cases of respiratory infection and exposure to atmospheric irritants, the reactions are useful, and to some extent desirable. They are usually self-limited, disappearing within a few days, or upon removal of the provoking agent. Here the distressing symptoms can be ameliorated with appropriate decongestant agents, or, in the case of severe or complicated respiratory infections, antibiotics may be given, with reasonable confidence of a cure. On the other hand, when nasal reactions are the peculiar response of an individual to an allergen, or to an undesirable situation, they serve no useful purpose. The nose here is a shock organ in a stressful situation, but can furnish no response of value. It merely causes the patient symptoms which add to his problems. In these cases, symptomatic treatment is of great benefit, but often the underlying faulty pattern of response cannot be altered. Such a patient may literally be considered to be paying his way in life "through the nose."

references 1. Maures, E. R., Mendez, F. C., Jr., and Hilsinger, R. C.: Importance of the Nose in Filtering and Humidifying Inspired Air. Ohio State Med. J. 61:41-42. 2. Holmes, T., Goodell H., Wolf, S., and Wolff, H. G.: The Nose. Springfield, Ill. 1950 Charles C. Thomas p. 10 ff. 3. Boies, L. H. R.: Fundamentals of Otolaryngology. Phila. W. B. Saunders Co. 1954 p. 160. 4. Proetz, A. W.: Applied Physiology of the Nose. St. Louis 1941 Zimmerman-Petty Co. p. 6. 5. Spikard, A.: The Common Cold, A Survey. Disease of the Chest 48:545-49. Nov. 1965. 6. Ibid. 7. Bourdial, J.: Role of Allergy in Upper Respiratory Tract Infection. Europa Med. Paris 4:75-80 1965. 8. Holmes, et al. The Nose p. 22. 9. Ibid. p. 320. 10. Proetz, A. W. op. cit. p. 321. 11. Ibid. p. 320. 12. Rees, Linford J.: Physiogenic and Psychogenic Factors in Vasomotor Rhinitis. J. Psychosomatic Research 8:101 Sept. 1964. 13. Horesh, A. J.: Allergy and Infection. An Allergy 23:621-35 Dec. 1965.

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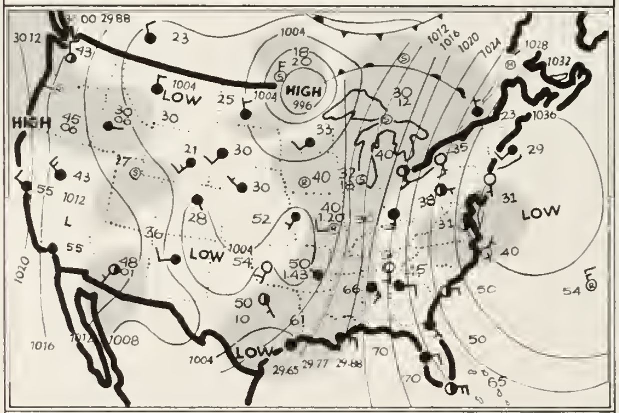

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Side effects: Occasional drowsiness, blurred vision, cardiac palpitations, flushing, dizziness, nervousness or gastrointestinal upsets. Precautions: Patient should not drive a car or operate dangerous machinery if drowsiness occurs. Except under professional care, do not give to patients under 12 yrs. or those who have persistent cough, high fever, heart or thyroid disease, hypertension or diabetes or use for more than 10 days.

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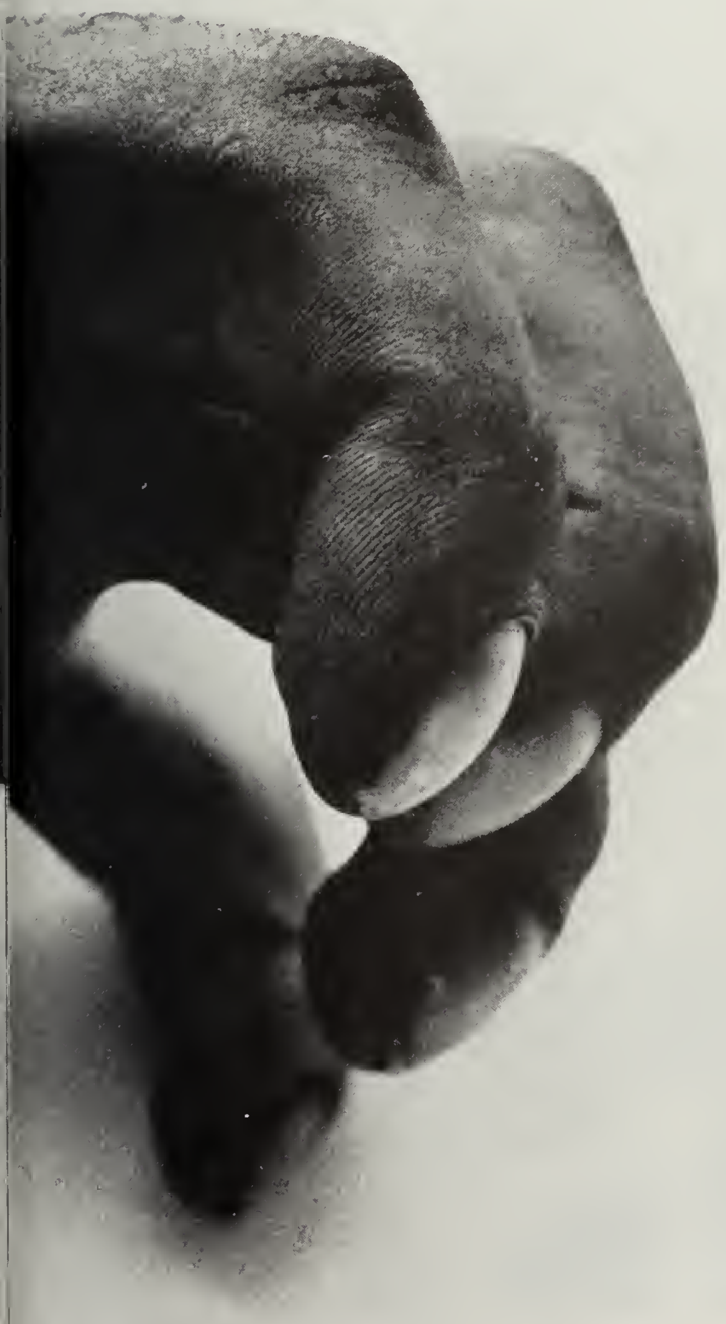

The "itch-scratch" cycle usually associated with inflammation often results in infected dermatoses because broken skin surfaces are particularly vulnerable to pathogenic bacteria.[1] To treat infected inflammatory dermatoses, Neo-Synalar Cream combines the most active topical corticosteroid with a highly reliable antibiotic generally reserved for topical application.

In Neo-Synalar, fluocinoline acetonide controls the inflammation and provides rapid relief from associated pruritus. At the same time, its antibacterial component—neomycin—combats superficial infection caused by many gram-positive and gram-negative bacilli[2] that often colonize and thrive on abraded skin.[1]

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controls the infection

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stops the scratch

Contraindications: Tuberculous, fungal, and most viral lesions of the skin (including herpes simplex, vaccinia, and varicella). Not for ophthalmic use. Contraindicated in individuals with a history of hypersensitivity to any of its components. **Precautions:** Neomycin rarely produces allergic reactions. Prolonged use of any antibiotic may result in overgrowth of nonsusceptible organisms; if this occurs, appropriate therapy should be instituted. Where severe local infection or systemic infection exists, the use of systemic antibiotics should be considered, based on susceptibility testing. While topical steroids have not been reported to have an adverse effect on pregnancy, the safety of their use on pregnant females has not absolutely been established. Therefore, they should not be used extensively on pregnant patients, in large amounts, or for prolonged periods of time. **Side Effects:** Side effects are not ordinarily encountered with topical corticosteroids. As with all drugs, however, a few patients may react unfavorably to Neo-Synalar under certain conditions. **Availability:** Neo-Synalar Cream (0.025% fluocinolone acetonide, neomycin sulfate, equivalent to 0.35% neomycin base), 5 and 15 Gm. tubes.

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References: **1.** Pillsbury, D. M., Shelley, W. B., and Kligman, A. M.: A manual of cutaneous medicine, Philadelphia, Saunders, 1961, p. 79. **2.** Barber, M., and Garrod, L. P.: Antibiotic and chemotherapy, Baltimore, Williams and Wilkins, 1963, p. 111.

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1. Bradley, J. E., *et al.*: J. Pediat. *38*:41 (Jan.) 1951.
2. Bradley, J. E.: Mod. Med. *20*:71 (Oct. 15) 1952.
3. Crunden, A. B., Jr., and Davis, W. A.: Am. J. Obst, & Gynec. *65*:311 (Feb.) 1953.

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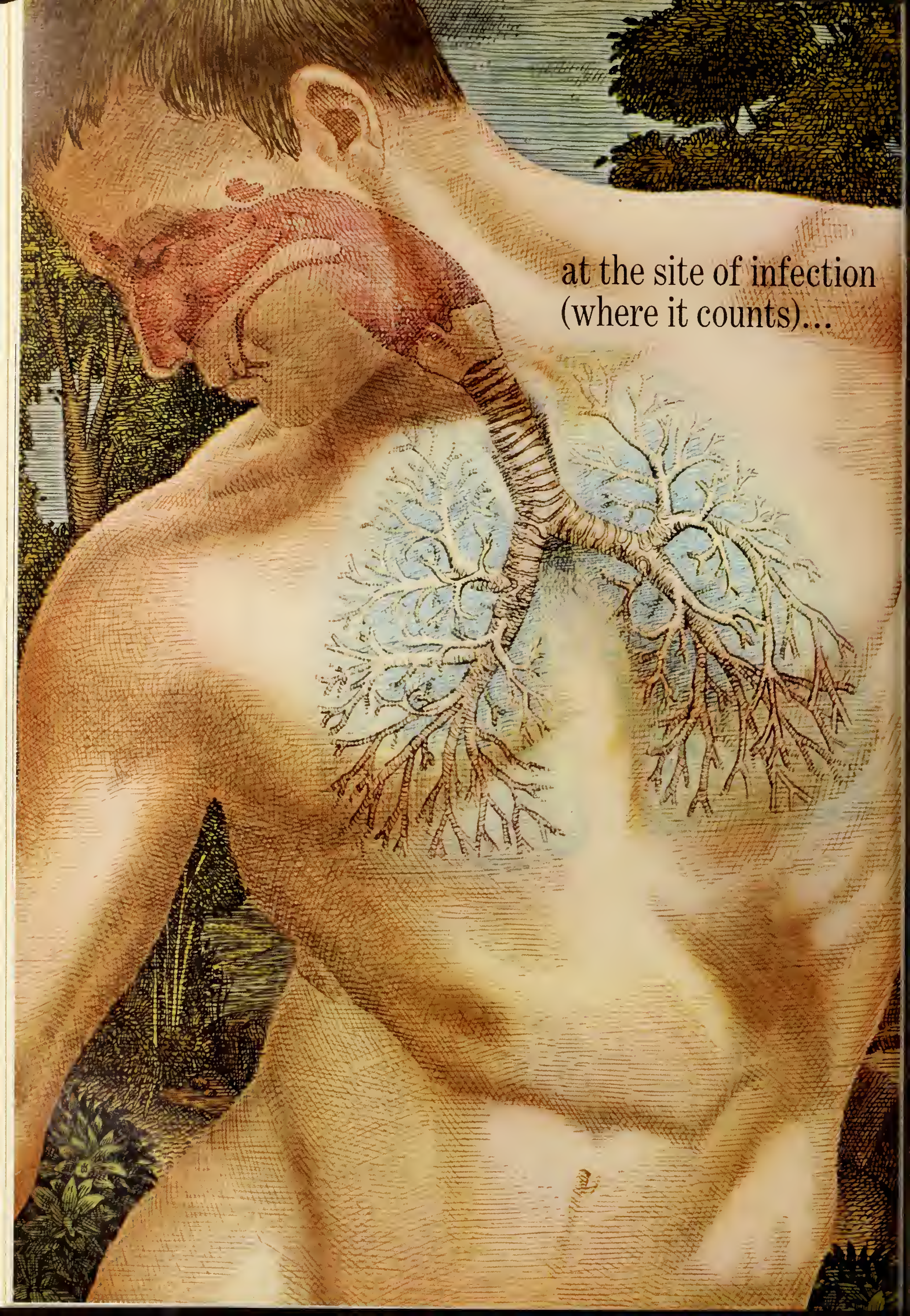
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Because it is the most active form of oral erythromycin, Ilosone can help assure consistently greater antibacterial activity at the site of infection. Ilosone produces peak antibacterial blood levels two to four times those of other erythromycin preparations.[1,2] Not only are these levels attained earlier, but they are maintained for much longer periods. Even the presence of food does not seem to affect the activity of Ilosone.[1,3]

In the treatment of patients with bacterial infections susceptible to erythromycin, Ilosone has compiled an excellent therapeutic record. Since it exerts its greatest activity against gram-positive organisms, it is particularly useful in common respiratory and soft-tissue bacterial infections. Ilosone kills—not merely inhibits—streptococci, pneumococci, and more strains of staphylococci than any other macrolide antibiotic. This bactericidal action, coupled with the high antibacterial levels attained, makes Ilosone especially valuable in patients with low host resistance, such as infants, debilitated individuals, and diabetics.

Ilosone has shown no cross-resistance with penicillin and may be effective against organisms that have become resistant to that agent. Despite its high antibacterial activity, Ilosone has demonstrated a low incidence of side reactions. Blood dyscrasias, ototoxicity, and tooth staining have not been observed. Infrequent cases of drug idiosyncrasy, manifested by a cholestatic jaundice, have occurred, but there have been no known definite residual effects.

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(See next page for prescribing information.)

Ilosone®/the most active oral form of erythromycin

Description: Ilosone is the most active form of oral erythromycin that has been developed. Because it is stable in acid, well absorbed, and excreted in lesser amounts in the bile, it provides faster, higher, and longer-lasting levels of antibacterial activity (ABA) in the serum, even when taken with food, than do comparable doses of erythromycin.

Indications: Ilosone is indicated in infections caused by microorganisms sensitive to its action (especially staphylococci, hemolytic streptococci, and pneumococci). The drug is therefore useful in a high proportion of bacterial diseases encountered in clinical practice and particularly in the treatment of bacterial infections of the upper and lower respiratory tract and soft tissues.

In the treatment of acute bacterial pharyngitis and tonsillitis, this antibiotic has promptly eradicated the bacteria (streptococci) and has produced a parallel prompt clinical improvement. There have been no group A beta-hemolytic streptococci resistant to this preparation. In beta-hemolytic streptococcus infections, treatment should be maintained for ten days to prevent the development of rheumatic fever or glomerulonephritis.

Erythromycin estolate has proved to be very effective in pneumococcus pneumonia and in acute bronchitis with pneumococci on culture. Bronchopneumonia and otitis media in children have responded well to its use.

The antibiotic has been used very successfully in staphylococcus infections. Good therapeutic results have been obtained in soft-tissue infections, abscesses, cellulitis, carbuncles, wound infections, and furunculosis.

In serious staphylococcus infections, erythromycin preparations should be used only in combination therapy with other antimicrobial agents. As is the case with any treatment regimen used in these severe conditions, surgical procedures should be performed when indicated, and large dosages of the antimicrobial agents should be employed. In this fashion, Ilosone has been effective in staphylococcus pneumonia, osteomyelitis, septicemia, empyema, and meningitis.

Multiple 500-mg. doses of the drug have been useful in gonorrhea and syphilis. Since penicillin is the drug of choice for the treatment of syphilis and gonorrhea, erythromycin estolate should be employed for these infections only in patients with a history of penicillin allergy. Also, other infections due to susceptible bacteria in patients known to be hypersensitive to penicillin or other antibiotics may be considered for treatment with Ilosone.

Contraindications: Ilosone is contraindicated in patients with a known history of sensitivity to this drug and in those with preexisting liver disease or dysfunction.

Side-Effects: Data obtained from seven years' use of propionyl erythromycin ester and erythromycin estolate (Ilosone) indicate that hepatic dysfunction with or without clinical jaundice may occur during or following courses of therapy with the drug.

Changes in liver function tests in such cases have been indicative of intrahepatic cholestasis. The symptoms appear to be the result of a form of sensitization. The initial symptoms have appeared in some cases after a few days of treatment but generally have followed one or two weeks of continuous therapy or several courses of the drug. Symptoms reappear promptly if the drug is readministered to sensitive patients, usually within forty-eight hours. Eosinophilia was noted in peripheral blood counts. The findings readily subsided without apparent residual effects when treatment was discontinued. Recovery was delayed in one reported instance. The physician indicated in this case that either drug-induced jaundice or viral hepatitis may have been responsible for the findings.

In one clinical study involving ninety-three patients treated with the antibiotic, three cases of jaundice were observed and an additional eleven cases developed some changes in liver function tests. Three of the patients had abnormal liver function tests a second time on readministration of the drug.

Even though it is assumed that not all cases of jaundice have been reported, it seems clear that the number is small compared with the amount of drug that has been used. Reported cases have included persons in whom there had been administered other drugs known to be associated at times with hepatic side-effects and cases in which the presence of viral hepatitis or other disease may have been responsible for the findings. In some of the cases, associated gastro-intestinal symptoms simulated the colic of biliary tract disease. In other instances, clinical symptoms and results of liver function tests resembled findings in extrahepatic obstructive jaundice. It appears that the occurrence of jaundice after administration of Ilosone is infrequent, but further investigations are being made to estimate its incidence more accurately.

In those cases mentioned above in which jaundice appeared to be definitely related to use of the drug, laboratory findings were characterized by increased direct-reacting bilirubin, elevated alkaline phosphatase levels, negative or weakly positive cephalin flocculation and thymol turbidity tests, elevated serum glutamic oxalacetic transaminase levels, peripheral eosinophilia, and normal cholecystograms.

Individual idiosyncrasy seems evident since jaundice has not been reported in other patients taking prolonged courses of the medication. Patients with chronic infection have been given 1 to 2 Gm. of the drug daily for periods of two to six months, and patients with rheumatic fever have taken prophylactic doses of 0.5 Gm. daily for two years without difficulty. In one group of 144 patients who received the drug daily for two years, no jaundice was noted. It was of interest that members of six of these patients' families, who were not taking the drug, had episodes of jaundice during the study period.

Transaminase and serum alkaline phosphatase levels were determined in a group of fifty-four adults and children who took 250 mg. of Ilosone daily for an average of sixteen months as rheumatic fever prophylaxis. The results were compared with those of a similar group of forty-four patients who received penicillin. There were no cases of jaundice in either group. Elevation of SGPT and serum alkaline phosphatase levels during the course of treatment was observed in one patient treated with Ilosone and in two patients treated with penicillin. Seven other patients in the group receiving Ilosone and four others in the penicillin group showed elevations in one of the tests at some time during administration of the drugs.

Very satisfactory therapeutic results, without toxicity, were reported in 102 pediatric patients who received short-term (ten-day) courses of Ilosone in the treatment of streptococcus infections. Results of liver function tests in these patients were comparable to those in a similar control group who had received penicillin.

Gastro-intestinal disturbances not associated with hepatic effects are observed in a small proportion of individuals as a result of a local stimulating effect of the medication on the alimentary tract; however, the normal intestinal gram-negative bacterial flora is not appreciably altered by erythromycin drugs.

Although allergic manifestations are uncommon with the use of erythromycin, there have been occasional reports of urticaria, skin eruptions, and, on rare occasions, anaphylaxis.

Administration and Dosage: Ilosone is administered orally.

Ilosone Pulvules®
Ilosone Chewable Tablets
Ilosone Drops
Ilosone, 125, for Oral Suspension

For infants and for children under twenty-five pounds of body weight, the usual dosage is 5 mg. per pound every six hours; for children twenty-five to fifty pounds, 125 mg. every six hours. (Tablets Ilosone Chewable should be chewed or crushed and swallowed with water.)

For adults and for children over fifty pounds, the usual dosage of Ilosone is 250 mg. every six hours.

For severe infections, these dosages may be doubled.

When larger doses are indicated, parenteral erythromycin therapy should be considered.

In the treatment of syphilis, the recommended total dosage is 20 to 30 Gm. given in divided doses for a period of ten to fifteen days. Close follow-up of the patient is necessary since erythromycin drugs have not had adequate evaluation in all stages of syphilis. Examinations of spinal fluid are recommended as part of the follow-up therapy.

For gonorrhea, 500 mg. four times a day for four days are recommended. In the treatment of gonorrhea, patients with a suspected lesion of syphilis should have a dark-field examination before receiving antibiotics, and monthly serologic tests should be made for a period of three months.

How Supplied: Pulvules Ilosone, Capsules, N.F., 125 and 250 mg. (equivalent to base), in bottles of 24 and 100.

Tablets Ilosone Chewable, N.F., 125 mg. (equivalent to base), in bottles of 50.

Ilosone Drops, 5 mg. (equivalent to base) per drop, in 10-cc.-size packages, with dropper calibrated at 25 and 50 mg.

Ilosone, 125, for Oral Suspension, N.F., 125 mg. (equivalent to base) per 5-cc. teaspoonful, in 60 and 150-cc.-size packages.

References: 1. Griffith, R. S., and Black, H. R.: Am. J. M. Sc., *247*:69, 1964. 2. Griffith, R. S., and Black, H. R.: Antibiotics & Chemother., *12*:398, 1962. 3. Hirsch, H. A., Pryles, C. V., and Finland, M.: Am. J. M. Sc., *239*:198, 1960.

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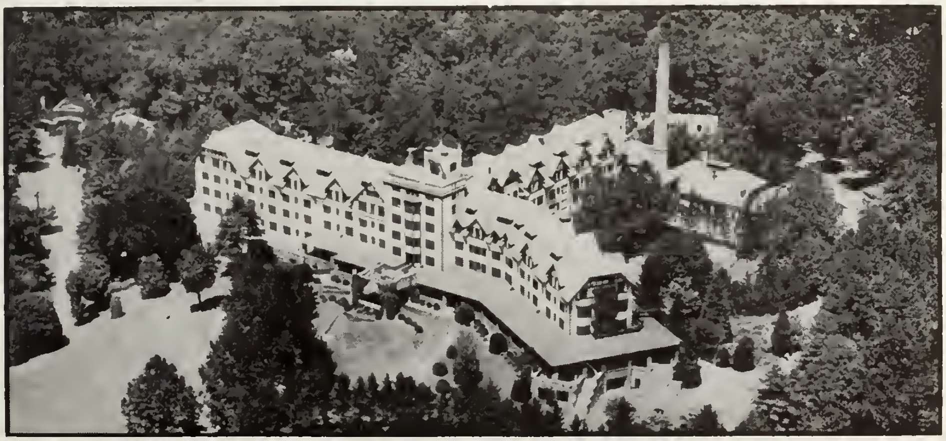

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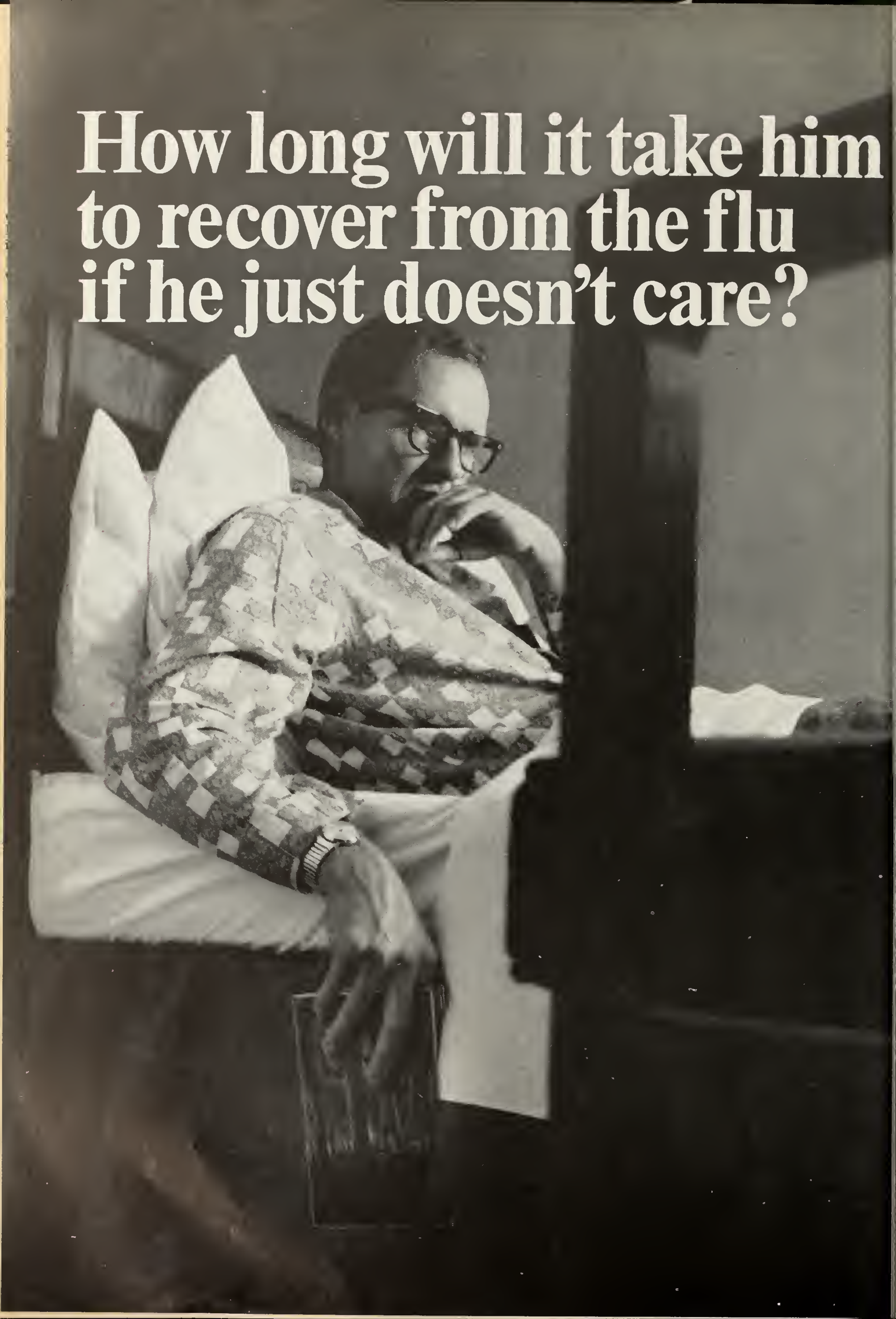
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*Multiple of adult Minimum Daily Requirement supplied.

†The need for these substances in human nutrition has not been established.

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Contraindications: As with other drugs with CNS stimulating action, Alertonic is contraindicated in hyperactive, agitated or severely anxious patients and in chorea or obsessive compulsive states.

Side effects: Reports of overstimulation have been rare. Patients who are known to be unduly sensitive to the effects of stimulant drugs should be observed carefully in the initial stages of treatment.

Dosage: Adults, 1 tablespoonful; children (over 15 years old), 1 to 2 teaspoonfuls; children (4 to 15 years old), 1 teaspoonful. To be taken three times daily 30 minutes before meals.

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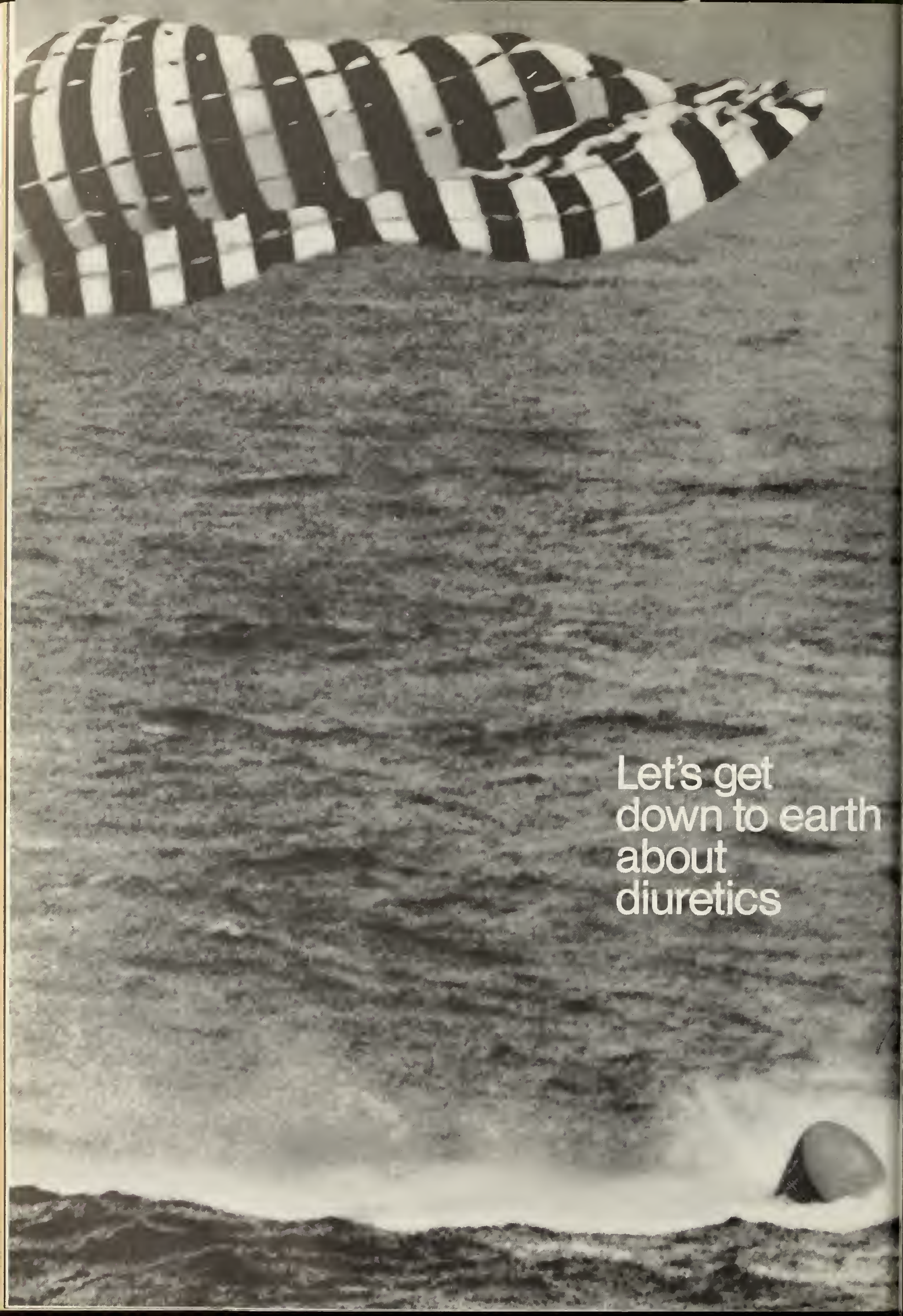
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*Brest, A. N., et al.:J. New Drugs 5:329, 1965.

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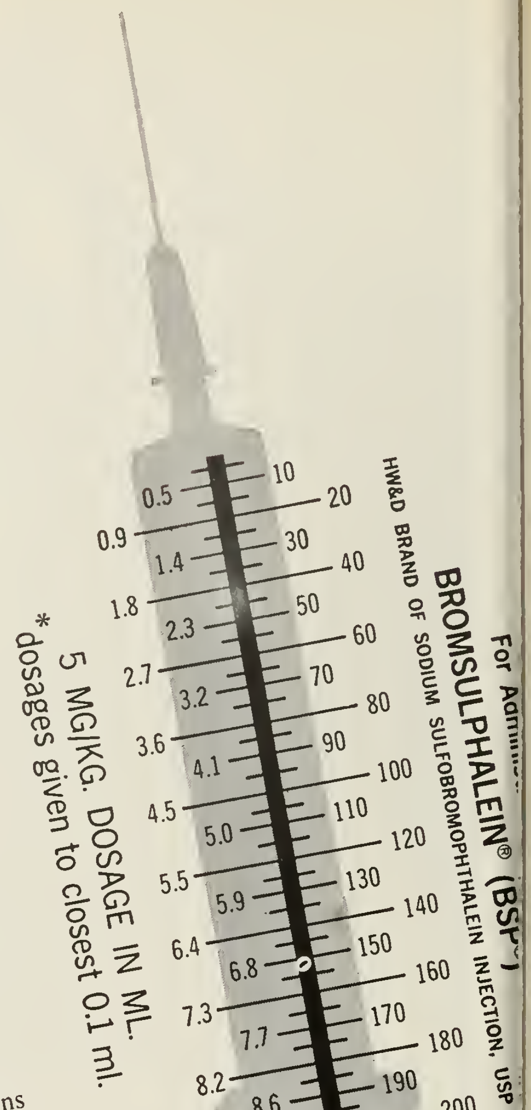

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prescribe economical Trisulfaminic®

Each tablet contains: Triaminic® 25 mg. (phenylpropanolamine hydrochloride 12.5 mg., pheniramine maleate 6.25 mg., pyrilamine maleate 6.25 mg.); Trisulfapyrimidines, U.S.P. 0.5 Gm. (sulfadiazine 0.167 Gm., sulfamerazine 0.167 Gm., sulfamethazine 0.167 Gm.)

PHARMACOLOGY: Triaminic decongests and promotes drainage of nasal and paranasal passages, and prevents any further histamine-induced damage; the triple sulfonamides inhibit susceptible bacterial invaders. INDICATIONS: For congestion and infection of the upper respiratory tract caused by sulfa-susceptible organisms. DOSAGE: Adults: 2 to 4 tablets initially, followed by 2 tablets every 6 hours. Medication should be continued until patient has been afebrile for 3 days. ADVANTAGES: The advantages of Trisulfaminic in upper respiratory infections are: freedom from narcotics or alcohol; therapeutic reliability; safety; economy; ease of administration; freedom from potential sensitization to broad-spectrum antibiotics which may be reserved for lower respiratory or other infections caused by susceptible organisms. CONTRAINDICATIONS: Contraindicated in sulfonamide and antihistamine sensitivity, impaired renal function, pregnancy approaching term, and in premature infants and newborn infants during the first month of life. Do not use in patients with glaucoma, prostatic hypertrophy, stenosing peptic ulcer, pyloroduodenal or bladder neck obstruction. WARNING: Use only after careful evaluation in patients with liver or renal damage, urinary obstruction, or blood dyscrasias. Deaths have been reported from hypersensitivity reactions with administration of sulfonamides. In intermittent or prolonged therapy, blood counts and liver and kidney function tests should be performed periodically. Sulfonamide therapy may potentiate the hypoglycemic action of sulfonylureas. PRECAUTIONS: Use with caution in patients with histories of significant allergy or asthma. Assure an adequate fluid intake. Because the antihistamines may cause drowsiness of varying degree, warn patients about activities requiring alertness such as driving a car or operating dangerous machinery. Use with caution in the presence of hypertension, hyperthyroidism, cardiovascular disease and diabetes. ADVERSE REACTIONS: As in all sulfonamide therapy, the following reactions may occur: headache, nausea, vomiting, diarrhea, icterus, hepatitis, pancreatitis, urticaria, rash, fever, cyanosis, hematuria, crystalluria, proteinuria, blood dyscrasias, petechiae, purpura, neuropathy and injection of the conjunctiva and sclera. If one or more of these reactions occur, the drug should be discontinued. With antihistaminic therapy there have been reports of sedation varying from mild drowsiness to deep sleep, dizziness, lassitude, inability to concentrate, fatigue, incoordination, tinnitus, blurred vision, diplopia, euphoria, nervousness, insomnia, tremors, palpitation, hypotension, headache, chest tightness, urinary frequency, dysuria, tingling of the hands, dryness of the mouth, throat, and nose, gastrointestinal disturbances such as epigastric distress, anorexia, nausea, vomiting, constipation and diarrhea and very rarely, leukopenia and agranulocytosis. Adverse reactions reported with the use of sympathomimetic amines include anxiety, tension, restlessness, nervousness, tremor, weakness, insomnia, headache, palpitation, tachycardia, angina, elevation of blood pressure, sweating, mydriasis, anorexia, nausea, vomiting, dizziness, constipation, and dysuria due to vesicle sphincter spasm. PACKAGE INFORMATION: Trisulfaminic Tablets: Supplied in bottles of 100 tablets. CAUTION: Federal law prohibits dispensing without prescription.

DORSEY LABORATORIES • *a division of The Wander Company* • **LINCOLN, NEBRASKA**

Against these three major pathogens…

Pneumococci
Penicillin-Sensitive Staphylococci
Beta-Hemolytic Streptococci

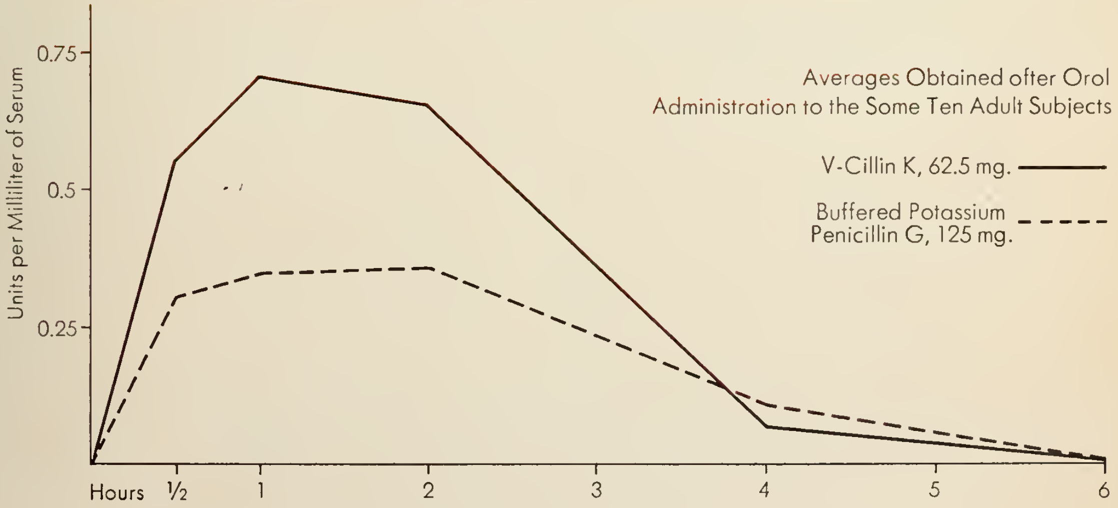
V-Cillin K® provides unexcelled oral antibacterial activity

because it combines a high degree of in-vitro activity...

Antibiotic	Staph. Aureus (Penicillin-Sensitive) MIC (mcg./ml.) Median	Staph. Aureus (Penicillin-Sensitive) MIC (mcg./ml.) Range	Streptococcus, Group A MIC (mcg./ml.) Median	Streptococcus, Group A MIC (mcg./ml.) Range	Diplococcus Pneumoniae MIC (mcg./ml.) Median	Diplococcus Pneumoniae MIC (mcg./ml.) Range
Penicillin V	0.02	0.02-0.04	0.02	0.003-0.4	0.01	0.005-0.2
Penicillin G	0.02	0.005-1.6	0.005	0.002-0.2	0.02	0.01-0.1
Methicillin	1.6	0.4-6.3	0.2	0.1-0.4	0.2	0.1-1.6
Oxacillin	0.4	0.1-3.1	0.04	0.02-0.4	0.1	0.04-0.8
Cloxacillin	0.2	0.2-0.8	0.1	0.1-0.8	—	—
Nafcillin	0.4	0.2-0.8	0.04	0.02-0.1	0.02	0.02-0.2
Ampicillin	0.2	0.1-0.8	0.02	0.01-0.04	0.02	0.01-0.04

Adapted from Klein, J. O., and Finland, M.: New England J. Med., 269 1019, 1963.

with high blood levels, even in the presence of food



Adapted from Griffith, R. S., and Block, H. R.: Current Ther. Res., 6 253, 1964.

V-Cillin K® Lilly

700157

Potassium Phenoxymethyl Penicillin

(See next page for prescribing information

New 500 mg. tablets...a more convenient way to give high doses

Description: V-Cillin K is the potassium salt of V-Cillin® (phenoxymethyl penicillin, Lilly). This chemically improved form combines acid stability with immediate solubility and rapid absorption. Higher serum levels are obtained more rapidly with this penicillin than with equal oral doses of penicillin G. The higher serum levels and acid stability of V-Cillin K make it a more dependable penicillin for oral use.

V-Cillin K, Pediatric, is an oral solution of clinically proved V-Cillin K in teaspoon dosage form. When mixed as directed, each 5 cc. (approximately one teaspoonful) will contain 125 mg. (200,000 units) phenoxymethyl penicillin as the potassium salt.

Indications: V-Cillin K has been shown to be effective in the treatment of streptococcus, pneumococcus, and gonococcus infections as well as infections caused by sensitive strains of staphylococci. It may be used for the prophylaxis of streptococcus infections in patients with a history of rheumatic fever and for the prevention of bacterial endocarditis after tonsillectomy and tooth extraction in those patients with a history of rheumatic fever or congenital heart disease.

Contraindication: V-Cillin K should not be administered to a patient with a history of penicillin hypersensitivity.

Precautions: V-Cillin K should be used cautiously, if at all, in a patient with a strongly positive history of allergy. Reactions occur more frequently in individuals with bronchial asthma or other allergies or in those who have previously demonstrated sensitivity to penicillin. If hypersensitivity reactions occur, the drug should be discontinued.

Adverse Reactions: Although serious allergic reactions are much less common with administration of oral penicillin than with intramuscular forms, skin rash, symptoms resembling those of serum sickness, or other manifestations of penicillin allergy may occur. When penicillin is administered, measures for treating anaphylaxis should be readily available. Those include epinephrine, oxygen, and pressor drugs for relief of immediate allergic manifestations as well as antihistamines and corticosteroids for delayed effects.

The use of antimicrobial agents may be associated with the overgrowth of antibiotic-resistant organisms; in such a case, antibiotic administration should be stopped and appropriate measures taken.

Administration and Dosage: For Tablets V-Cillin K and for V-Cillin K, Pediatric, the usual dosage ranges from 125 mg. (200,000 units) three times a day to 500 mg. (800,000 units) every four hours. For infants, the daily dosage may be 50 mg. per Kg. of body weight divided into three doses.

Beta-hemolytic streptococcus infections without associated bacteremia may be treated with 200,000 to 400,000 units three times a day. Therapy should be continued for a minimum of ten days to prevent development of rheumatic fever and/or other serious complications. Dosage for routine streptococcus prophylaxis in patients with a history of rheumatic fever or congenital heart disease may be 200,000 units once or twice daily. When such patients undergo tonsillectomy, tooth extraction, or other minor surgery, the prophylactic dose should be 500,000 units every six hours given two days prior to surgery and for two days postoperatively. If oral medication is not feasible on the day of surgery, parenteral therapy should be considered. Mild to moderately severe pneumococcus pneumonia has been treated effectively with 250 mg. every six hours.

In staphylococcus infections, 400,000 units or more should be given every six to eight hours in conjunction with indicated surgical procedures.

For gonorrhea in males, 500 mg. (800,000 units) every six hours for three doses may be employed; in females, 500 mg. every four hours for six doses are recommended. Patients with a suspected lesion of syphilis should have a dark-field examination before receiving penicillin and monthly serologic tests for a minimum of three months.

How Supplied: Tablets V-Cillin K, U.S.P., 125 mg. (200,000 units), in bottles of 50 and 100; 250 mg. (400,000 units), and 500 mg. (800,000 units) in bottles of 24 and 100.

V-Cillin K, Pediatric, for Oral Solution, 125 mg. (200,000 units) per 5 cc. of solution, in 40, 80, and 150-cc.-size packages.

Additional information available to physicians upon request. Eli Lilly and Company, Indianapolis, Indiana 46206.

Lilly

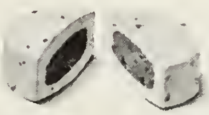
700157

To "catch" your patient's cold so others won't...

the speckled tablet with a core of difference

SUSTAINED-ACTION

Naldecon®



Each tablet contains:	Outer layer (immediate action)	Core (sustained action)
phenylpropanolamine HCl	20 mg	20 mg
phenylephrine HCl	5 mg	5 mg
phenyltoloxamine citrate	7.5 mg	7.5 mg
chlorpheniramine maleate	2.5 mg	2.5 mg

Each teaspoonful (5 ml) of syrup contains the equivalent of one-half tablet

For rapid and sustained symptomatic relief of colds and minor upper respiratory infections.

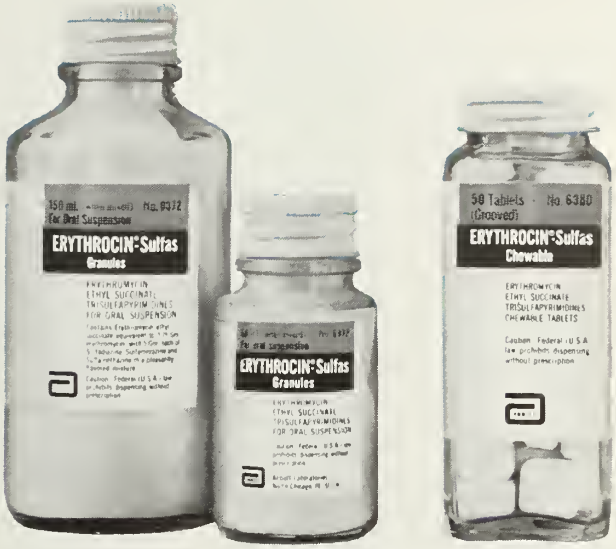
Prescribing Information: For complete information consult Official Package Circular. **Effectiveness:** Clinical experience has shown this formulation to be effective in relieving the symptoms of nasal congestion associated with pollen allergy or minor upper respiratory infections (common cold, nasopharyngitis, acute and chronic sinusitis). **Precautions:** Do not drive or operate machinery while taking Naldecon. Exceed dose or give to children under 6 years old only on advice of physician. **Contraindications:** Severe hypertension, hyperthyroidism, serious organic heart disease or severe diabetes mellitus. **Usual Dose:** Adults: One tablet morning, midafternoon and evening. Naldecon tablets are scored and may be broken for fractional dosage, without loss of sustained-action effect. **Supplied:** Bottles of 50 and 500 tablets. Syrup, 1 pt. bottle.

BRISTOL

Bristol Laboratories
Division of Bristol-Myers Company
Syracuse, New York 13201

Perhaps there have been times when you wanted to prescribe erythromycin and triple sulfas for little patients. Now you can—with a choice of two new fine-tasting pediatric forms.

New– Two Pediatric Forms of Erythromycin and Triple Sulfas



ERYTHROCIN®-SULFAS Chewable (Erythromycin ethyl succinate-trisulfapyrimidines chewable tablet)

In clinical trials[1,2], this orange-flavored tablet was given to 55 patients, aged four months to 18 years.

Diagnoses (multiple in some cases) represented a cross section of bacterial infections commonly seen in pediatric office practice.

Therapy was given from three to 12 days, with an average of six days.

Of the 55 patients, 30 were reported cured within 72 hours, while 22 showed partial recovery within the same time, and subsequent clinical cure.

A clinical cure rate of 94.5%

ERYTHROCIN®-SULFAS Granules (Erythromycin ethyl succinate-trisulfapyrimidines granules for oral suspension)

87 patients were treated[1,2]—all children, ages four months to 15 years.

The diagnoses were multiple in some cases and were chiefly bacterial infections of the respiratory tract.

Dosage was maintained from three to 10 days; average treatment was five days. All of the ill children accepted the orange-flavored suspension favorably.

53 were clinically cured within 72 hours, while 32 showed partial relief within the same time, and subsequent clinical cure.

701358

A clinical cure rate of 97.7%

1. Case Reports on File, Dept. Clin. Development, Abbott Laboratories.
2. Polley, R.F.L., Use of Erythromycin-Sulfas in Office Practice, Western Med., 7:177, July, 1966.

ABBOTT

Brief
Summary
on next
page

ERYTHROCIN®-SULFAS
Brief Summary

Contraindications: Known sensitivity to erythromycin or sulfonamides. Because of the possibility of kernicterus with sulfonamides, do not use in pregnancy at term, premature or newborn infants.

Warnings: As with other forms of sulfonamide therapy, carefully evaluate patients with liver or kidney damage, urinary obstruction, or blood dyscrasia. Deaths have been reported from hypersensitivity reactions and blood dyscrasias following use of sulfonamides. Perform blood counts and liver and kidney function tests if used repeatedly at close intervals or for long periods.

Precautions, Side Effects: Occasionally mild abdominal discomfort, nausea or vomiting may occur with erythromycin, generally controlled by reduction of dosage. Mild allergic reactions (such as urticaria and other skin rashes) may occur. Serious allergic reactions have been extremely infrequent. Use sulfonamides with caution in patients with a history of allergy. Assure adequate fluid intake to prevent crystalluria and institute alkali therapy if indicated. If overgrowth of nonsusceptible organisms occurs, withdraw the drug and institute appropriate treatment. If a patient should show signs of hypersensitivity, appropriate countermeasures (e.g. epinephrine, steriods, etc.) should be administered and the drug withdrawn.

Adverse Reactions: Sulfonamide therapy may be associated with headache, nausea, vomiting, urticaria, diarrhea, hepatitis, pancreatitis, blood dyscrasias, neuropathy, drug fever, skin rash, injection of the conjunctiva and sclera, petechiae, purpura, hematuria and crystalluria.

Side effects due to erythromycin are infrequent, but occasional abdominal discomfort, nausea, or vomiting, urticaria and other skin rashes may occur.

Supplied: The Granules for Oral Suspension come in bottles of 60 ml. and 150 ml. The Chewable tablets are in bottles of 50. Each 5-ml. teaspoonful of reconstituted Granules or each Chewable tablet provides erythromycin ethyl succinate equivalent to 125 mg. of erythromycin activity and 167 mg. of each of sulfadiazine, sulfamerazine and sulfamethazine.

701358 ABBOTT

He leaves to make an urgent call But doesn't use the phone at all

Parepectolin for quick relief of acute diarrhea
...soothes colicky pain with paregoric
...consolidates fluid stools with pectin
...adsorbs irritants with kaolin, and protects intestinal mucosa.

Whether it's a 24-hour "bug", a food problem, or simply nervousness and anxiety, Parepectolin will bring the diarrhea under control until etiology can be determined. In some cases, Parepectolin may be all the therapy necessary.

Parepectolin®

Each fluid ounce of creamy white suspension contains:
Paregoric (equivalent).........(1.0 dram) 3.7 ml.
Contains opium (¼ grain) 15 mg. per fluid ounce.
warning: may be habit forming
Pectin .... (2½ grains) 162 mg.
Kaolin (specially purified)....(85 grains) 5.5 Gm.
(alcohol 0.69%)
Usual Adult Dose: One or two tablespoonfuls three times daily.

RORER
WILLIAM H. RORER, INC.
Fort Washington, Pa.

The AMBAR SCRAPBOOK of **Obesity Oddities** FACT & LEGEND

GALLSTONES HAVE BEEN FOUND IN 60% OF PATIENTS WHO WEIGH MORE THAN 300 POUNDS, 45% HAVE DIABETES, AND 15-TO-20% HAVE HIGH BLOOD PRESSURE.

*SOURCE: DUNCAN, G.G.: SCIENCE NEWS LETTER, **83**:403 (JUNE 29) 1963.*

NAPOLÉON BONAPARTE *LOST THE BATTLE OF WATERLOO BECAUSE HE WAS TOO FAT!*

ACCORDING TO THE NEW YORK TIMES OF APRIL 13, 1890, THE DEFEAT OCCURRED BECAUSE HE FAILED TO CHECK HIS INTELLIGENCE INFORMATION. "IT WAS A MATTER OF MERE INDOLENCE AND THIS INDOLENCE WAS CAUSED BY FAT."

*SOURCE: JAMA **186**:65 (OCT. 5) 1963.*

THE BOOK ***"PRAY YOUR WEIGHT AWAY"*** URGES READERS TO "ASK GOD TO HELP YOU LIKE EXERCISE" FOR 15 MINUTES A DAY.

SOURCE: REV. C.W. SHEDD: NEW YORK, LIPPINCOTT, 1958.

DIET DROPOUTS ACCORDING TO DRS. SHIPMAN AND PLESSET "APPARENTLY NO DIETER SUCCEEDS WHO IS VERY ANXIOUS OR DEPRESSED."*

THE AMBAR FORMULA PROVIDES **METHAMPHETAMINE** TO HELP **ELEVATE** THE **MOOD** AND **PHENOBARBITAL** TO HELP REDUCE **ANXIETY.**

SOURCE: ARCHIVES OF GENERAL PSYCHIATRY **8:26 (JUNE 1963).*

CONTROL FOOD AND MOOD ALL DAY LONG WITH A SINGLE MORNING DOSE

One Ambar Extentab before breakfast can help control most patients' appetite for up to 12 hours. Methamphetamine, the appetite suppressant, gently elevates mood and helps overcome dieting frustrations. Phenobarbital, the sedative in Ambar, controls irritability and anxiety ...helps maintain a state of mental calm and equanimity. Both work together to ease the tensions that erode the willpower during periods of dieting.

Ambar#2 Extentabs®

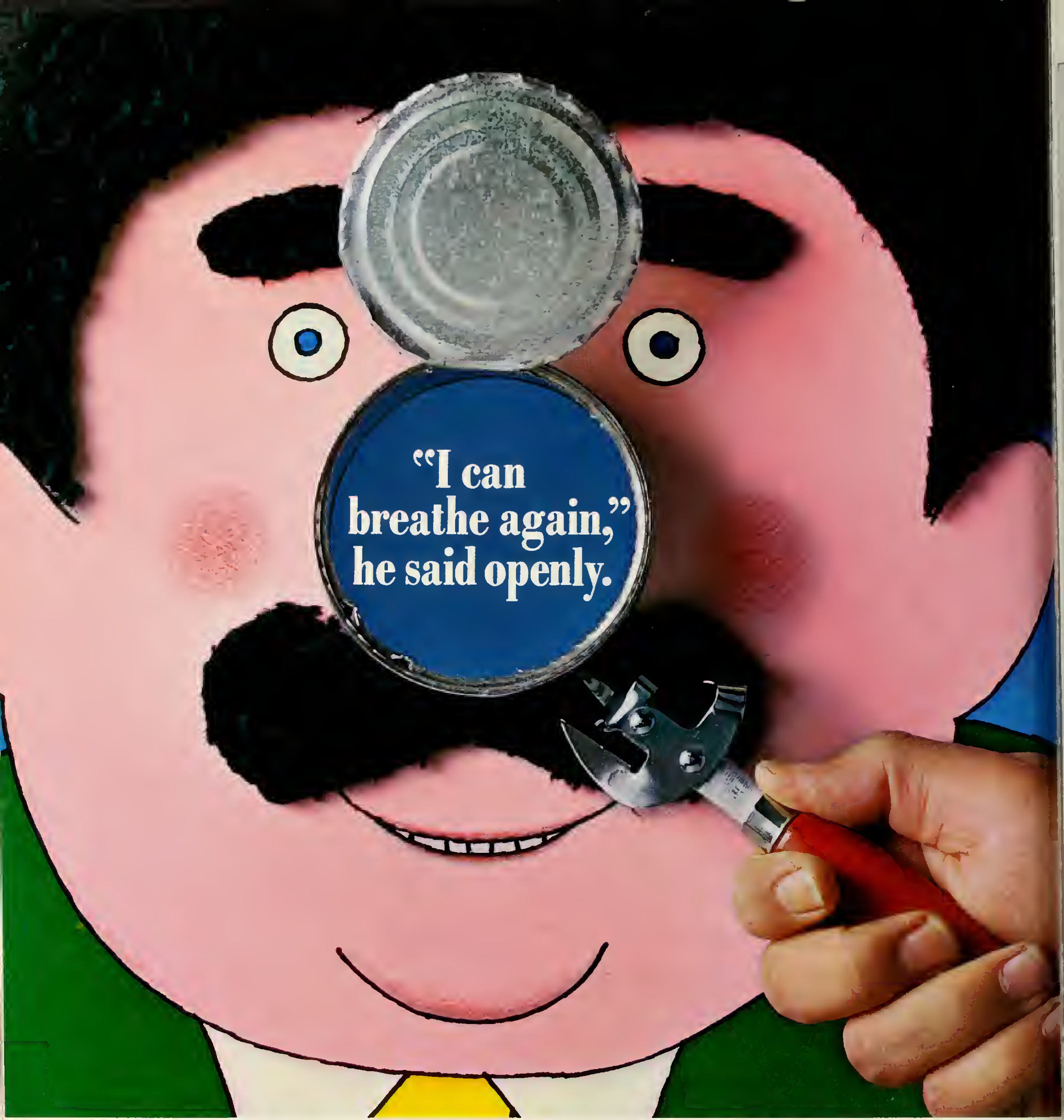
methamphetamine HCl 15 mg.,
phenobarbital 64.8 mg. (1 gr.)
(Warning: may be habit forming)

Also available: Ambar #1 Extenabs® – methamphetamine hydrochloride 10 mg., phenobarbital 64.8 mg. (1 gr.) (Warning: may be habit forming).

BRIEF SUMMARY—**Indications:** Ambar suppresses appetite and helps offset emotional reactions to dieting. **Side Effects:** Nervousness or excitement occasionally noted, but usually infrequent at recommended dosages. Slight drowsiness has been reported rarely. **Precautions:** Administer with caution in the presence of cardiovascular disease or hypertension. **Contraindications:** Hypersensitivity to barbiturates or sympathomimetics; patients with advanced renal or hepatic disease. See package insert for further details.

A. H. ROBINS CO., Richmond, Virginia 23220

A-H-ROBINS



in sinusitis, colds, U. R. I.
Dimetapp® Extentabs®

(Dimetane® [brompheniramine maleate], 12 mg.; phenylephrine HCl, 15 mg.; phenylpropanolamine HCl, 15 mg.)

up to 10-12 hours clear breathing on one tablet

It's clear—Dimetapp lets your "stuffed-up" patients breathe easy again. Each hard-working Extentab brings welcome relief from the stuffiness, drip and congestion of upper respiratory conditions for up to 10-12 hours. Yet, patients seldom experience drowsiness or overstimulation. The key to success is the Dimetapp formula: Dimetane (brompheniramine maleate)—along with phenylephrine and phenylpropanolamine, two time-tested decongestants. They get the job done...in a hurry.

Contraindications: Hypersensitivity to antihistamines. Not recommended for use during pregnancy. **Precautions:** Until patient's response has been determined, he should be cautioned against engaging in operations requiring alertness. Administer with care to patients with cardiac or peripheral vascular diseases or hypertension. **Side Effects:** Hypersensitivity reactions including skin rashes, urticaria, hypotension and thrombocytopenia have been reported on rare occasions. Drowsiness, lassitude, nausea, giddiness, dryness of the mouth, mydriasis, increased irritability or excitement may be encountered. **Dosage:** 1 Extentab morning and evening. **Supplied:** Bottles of 100 and 500.

A. H. ROBINS CO., Richmond, Virginia 23220

A-H-ROBINS

When thiazide or reserpine alone won't keep

Establish and maintain early, more decisive control of blood pressure

When blood pressure won't stay down despite initial therapy—when complaints of headache, fatigue or dizziness are often voiced—it may be time for a change to DIUTENSEN-R.

DIUTENSEN-R is thiazide and reserpine plus cryptenamine—a rational, comprehensive therapy to help establish and maintain early, more decisive control of blood pressure.

The cryptenamine in DIUTENSEN-R helps improve normal vasodilating reflexes while the thiazide and reserpine components maintain vasorelaxant, sedative, and saluretic benefits. Cryptenamine lowers pressoreceptor reflex thresholds (which may be abnormally high in hypertension)—"resets" pressoreceptors to function at more nearly normotensive levels.

Early, more decisive control with DIUTENSEN-R *helps secure continuing benefits—may reduce or even obviate the need for poorly tolerated drugs later in therapy.*

Indications: DIUTENSEN-R may be employed in all grades of essential hypertension.
Dosages: Usual dose is 1 tablet twice daily, at morning and evening meals. However, adjustment of dosage to suit individual circumstances may be required. Please refer to package insert for full particulars.
Side effects and precautions: The side effects observed with patients on DIUTENSEN-R have been of a mild and nonlimiting nature. These include occasional urinary frequency, nocturia, nasal congestion, muscle cramps, skin rash, joint pains due to gout and nausea and dizziness which have been reported for the individual components. Most of these symptoms disappear while the drug is continued at the same or lower dosage level. The concomitant use of digitalis and DIUTENSEN-R may increase the possibility of digitalis-like intoxication. If there is evidence of myocardial irritability (extrasystoles, bigeminy or AV block), dosage of DIUTENSEN-R should be reduced or discontinued. Nocturia in patients with marginal cardiac status and salt and fluid retention can be effectively controlled by limiting the time of administration to early afternoon. DIUTENSEN-R should not be used in patients with a known intolerance to reserpine. Package inserts furnish a complete summary of recommended cautions related to each of the ingredients of DIUTENSEN-R.
*As tannate salts equivalent to 130 Carotid Sinus Reflex Units.

NEISLER UNION CARBIDE
NEISLER LABORATORIES, INC. • DECATUR, ILLINOIS
SUBSIDIARY OF UNION CARBIDE CORPORATION

DIUTENSEN®-R

Cryptenamine 1.0 mg* Methyclothiazide 2.5 mg Reserpine 0.1 mg

Posed by professional model.

You can't set her free. But you can help her feel less anxious.

You know this woman.

She's anxious, tense, irritable. She's felt this way for months.

Beset by the seemingly insurmountable problems of raising a young family, and confined to the home most of the time, her symptoms reflect a sense of inadequacy and isolation. Your reassurance and guidance may have helped some, but not enough.

SERAX (oxazepam) cannot change her environment, of course. But it can help relieve anxiety, tension, agitation and irritability, thus strengthening her ability to cope with day-to-day problems. Eventually—as she regains confidence and composure—your counsel may be all the support she needs.

> Indicated in anxiety, tension, agitation, irritability, and anxiety associated with depression.
>
> May be used in a broad range of patients, generally with considerable dosage flexibility.

Contraindications: History of previous hypersensitivity to oxazepam. Oxazepam is not indicated in psychoses.

Precautions: Hypotensive reactions are rare, but use with caution where complications could ensue from a fall in blood pressure, especially in the elderly. One patient exhibiting drug dependency by taking a chronic overdose developed upon cessation questionable withdrawal symptoms. Carefully supervise dose and amounts prescribed, especially for patients prone to overdose; excessive prolonged use in susceptible patients (alcoholics, ex-addicts, etc.) may result in dependence or habituation. Reduce dosage gradually after prolonged excessive dosage to avoid possible epileptiform seizures. Caution patients against driving or operating machinery until absence of drowsiness or dizziness is ascertained. Warn patients of possible reduction in alcohol tolerance. Safety for use in pregnancy has not been established.

Not indicated in children under 6 years; absolute dosage for 6 to 12 year-olds not established.

Side Effects: Therapy-interrupting side effects are rare. Transient mild drowsiness is common initially; if persistent, reduce dosage. Dizziness, vertigo and headache have also occurred infrequently; syncope, rarely. Mild paradoxical reactions (excitement, stimulation of affect) are reported in psychiatric patients. Minor diffuse rashes (morbilliform, urticarial and maculopapular) are rare. Nausea, lethargy, edema, slurred speech, tremor and altered libido are rare and generally controllable by dosage reduction. Although rare, leukopenia and hepatic dysfunction including jaundice have been reported during therapy. Periodic blood counts and liver function tests are advised. Ataxia, reported rarely, does not appear related to dose or age.

These side reactions, noted with related compounds, are not yet reported: paradoxical excitation with severe rage reactions, hallucinations, menstrual irregularities, change in EEG pattern, blood dyscrasias (including agranulocytosis), blurred vision, diplopia, incontinence, stupor, disorientation, fever, euphoria and dysmetria.

Availability: Capsules of 10, 15 and 30 mg. oxazepam.

To help you relieve anxiety and tension

Serax®
(oxazepam)

Wyeth®
SERVICE TO MEDICINE

Wyeth Laboratories
Philadelphia, Pa.

YOUR OWN ORGANIZATION SPONSORED

INCOME PROTECTION PLAN

HAS PAID OVER

$87,800

OF BENEFITS TO MEMBERS OF THE

SOUTH CAROLINA MEDICAL ASSOCIATION

FOR TIME LOST DUE TO DISABILITY

MORE THAN 350 MEMBERS NOW COVERED

LEARN HOW YOUR

S.C.M.A. INCOME PROTECTION PLAN

CAN HELP YOU, TOO

PREMIUMS FOR ALL INSUREDS WERE REDUCED IN 1963

CHARLES W. DUDLEY, 236 Ashley Ct., Florence, S. C.
Looks Forward to Greeting You at Your Annual Convention
Ask Him For Full Details

EDUCATORS MUTUAL LIFE INSURANCE COMPANY
HOME OFFICE, LANCASTER, PENNA.

HIGHLAND HOSPITAL

ASHEVILLE, NORTH CAROLINA

Founded 1904

A Division Of The Department Of Psychiatry Of Duke University

Accredited by the Joint Commission on Accreditation and Certified for Medicare

Complete facilities for evaluation of and intensive treatment of psychiatric patients, including individual psychotherapy, group therapy, psychodrama, electro-convulsive therapy, Indoklon convulsive therapy, drugs, social service work with families, family therapy, and an extensive and well organized activities program, including occupational therapy, art therapy, athletic activities and games, recreational activities and outings. The treatment program of each patient is carefully supervised in order that the therapeutic needs of each patient may be realized.

Complete modern facilities with 85 acres of landscaped and wooded grounds in the City of Asheville.

Brochures and information on financial arrangements available

Contact: Mrs. Elizabeth Harkins, ACSW, Coordinator of Admissions
or
Charles W. Neville, Jr., M. D.
Assistant Professor of Psychiatry and Medical Director
Area Code 704 - 253-2761

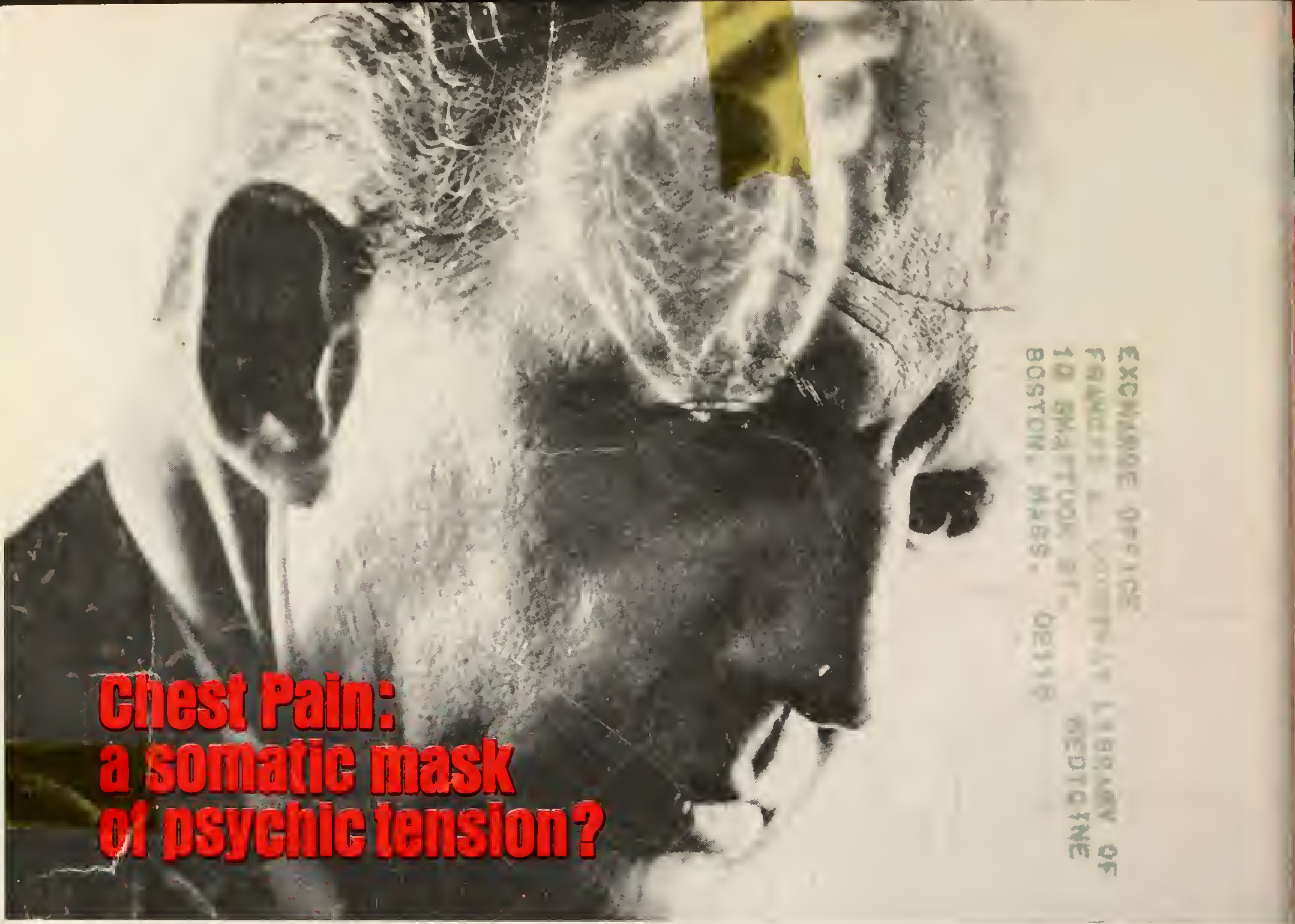
raldrate

(SYRUP OF CHLORAL HYDRATE)

A palatable chloral hydrate syrup
containing 10 grains in each teaspoonful.

J. and V.

JONES and VAUGHAN
Richmond 26, Virginia



EXCHANGE OFFICE
FRANCIS A. COUNTWAY LIBRARY OF
10 SHATTUCK ST. MEDICINE
BOSTON, MASS. 02115

"Heart symptoms"—chest pain, tachycardia, arrhythmia—invariably alarm and preoccupy the patient, though they may be completely without organic basis. Such symptoms often are somatic masks of psychic tension, arising from constant encounters with stressful situations.

When the problem is diagnosed as emotionally produced, consider Valium (diazepam) as adjunctive therapy. Valium (diazepam) acts rapidly to calm the patient, to reduce his psychic tension and relieve associated cardiovascular complaints.

NEUROTIC FATIGUE—the chronic tiredness resulting from emotional strain which so often accompanies psychogenic "heart" symptoms—also can be alleviated by this highly useful agent. Valium (diazepam) often achieves results where other psychotherapeutic agents have failed.

Valium (diazepam) is generally well tolerated, and usually does not impair mental acuity or ability to function. If side effects such as ataxia and drowsiness occur, they usually disappear with dosage adjustment.

Contraindications: Infants, patients with history of convulsive disorders or glaucoma.

Warning: Not of value in the treatment of psychotic patients, and should not be employed in lieu of appropriate treatment.

Precautions: Limit dosage to smallest effective amount in elderly patients (not more than 1 mg, one or two times daily) to preclude ataxia or oversedation. Advise patients against possibly hazardous procedures until correct maintenance dosage is established; driving during therapy not recommended. In general, concurrent use with other psychotropic agents is not recommended. Warn patients of possible combined effects with alcohol. Safe use in pregnancy not established. Observe usual precautions in impaired renal or hepatic function and in patients who may be suicidal; periodic blood counts and liver function tests advisable in long-term use. Cease therapy gradually.

Side Effects: Side effects (usually dose-related) are fatigue, drowsiness and ataxia. Also reported: mild nausea, dizziness, blurred vision, diplopia, headache, incontinence, slurred speech, tremor and skin rash; paradoxical reactions (excitement, depression, stimulation, sleep disturbances and hallucinations) and changes in EEG patterns. Abrupt cessation after prolonged overdosage may produce withdrawal symptoms similar to those seen with barbiturates, meprobamate and chlordiazepoxide HCl.

Dosage — Adults: Mild to moderate psychoneurotic reactions, 2 to 5 mg b.i.d. or t.i.d.; severe psychoneurotic reactions, 5 to 10 mg t.i.d. or q.i.d.; alcoholism, 10 mg t.i.d. or q.i.d. in first 24 hrs, then 5 mg t.i.d. or q.i.d. as needed; muscle spasm with cerebral palsy or athetosis, 2 to 10 mg t.i.d. or q.i.d. Geriatric patients: 1 or 2 mg/day initially, increase gradually as needed.

Supplied: Tablets, 2 mg, 5 mg and 10 mg; bottles of 50 for convenience and economy in prescribing.

Roche Laboratories Division of Hoffmann-La Roche Inc.,
Nutley, N.J. 07110

for somatic symptoms of psychic tension

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Immunization

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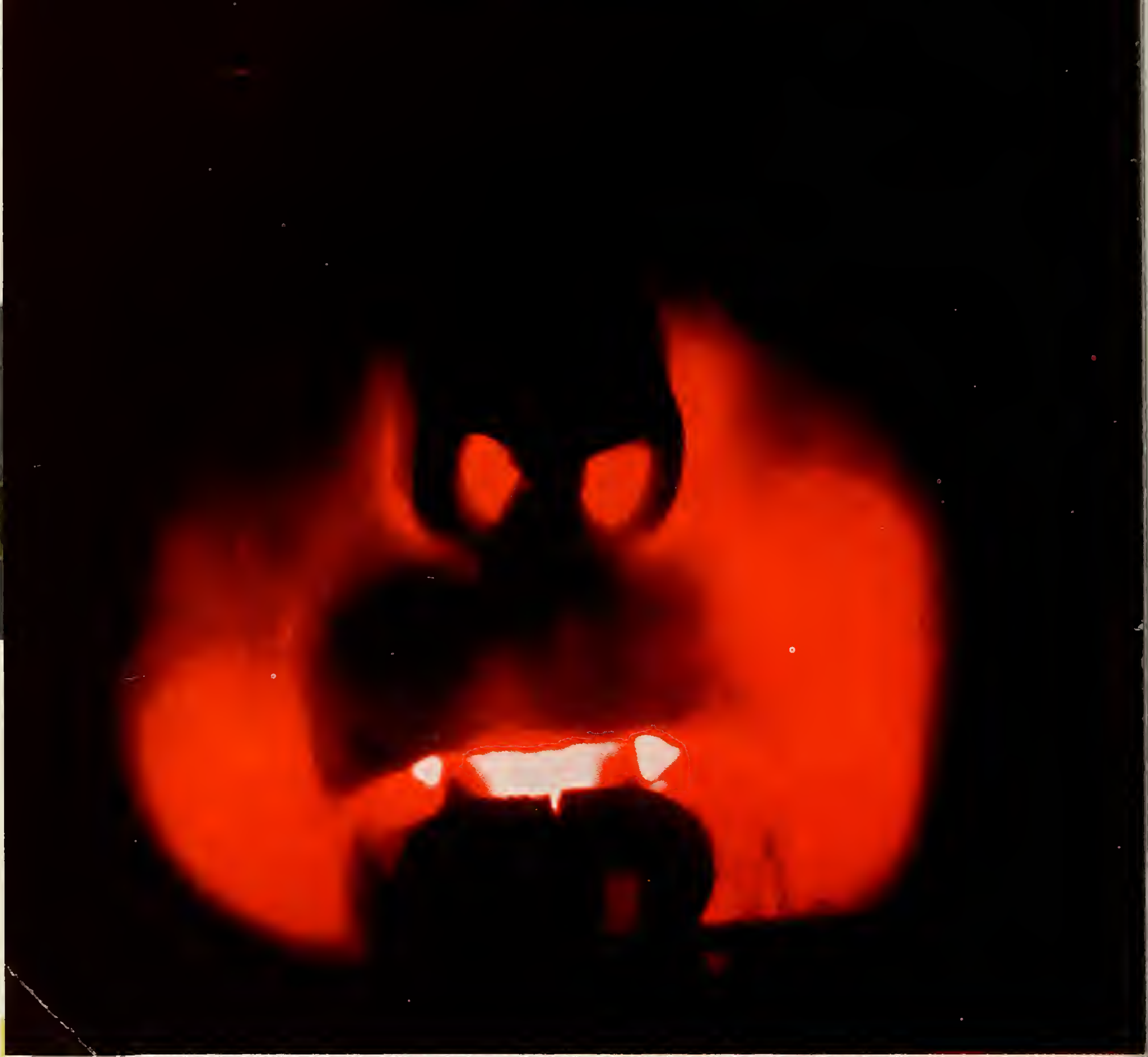

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Length—short articles of about 2,500 words (about 8 typewritten pages, double spaced) are preferred. Longer articles ordinarily will defer to the shorter ones in schedule of publication.

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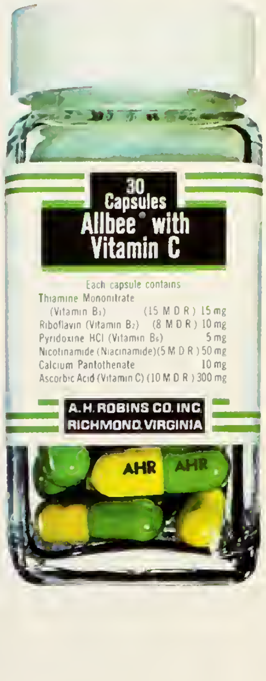
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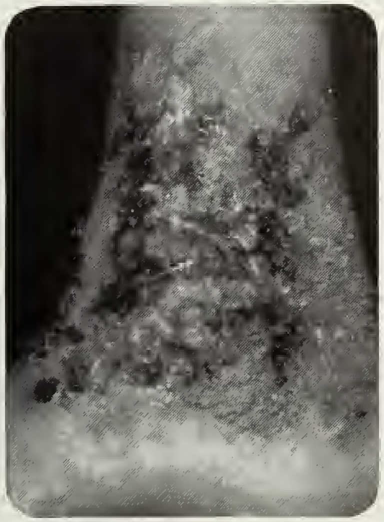
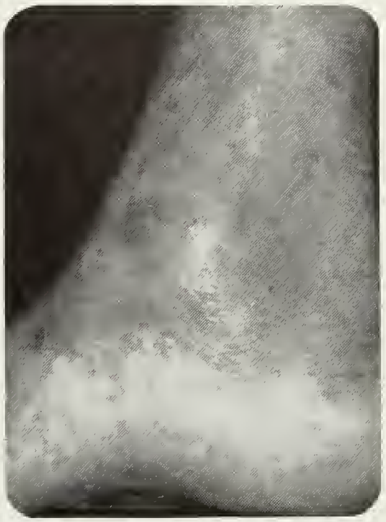


Before treatment



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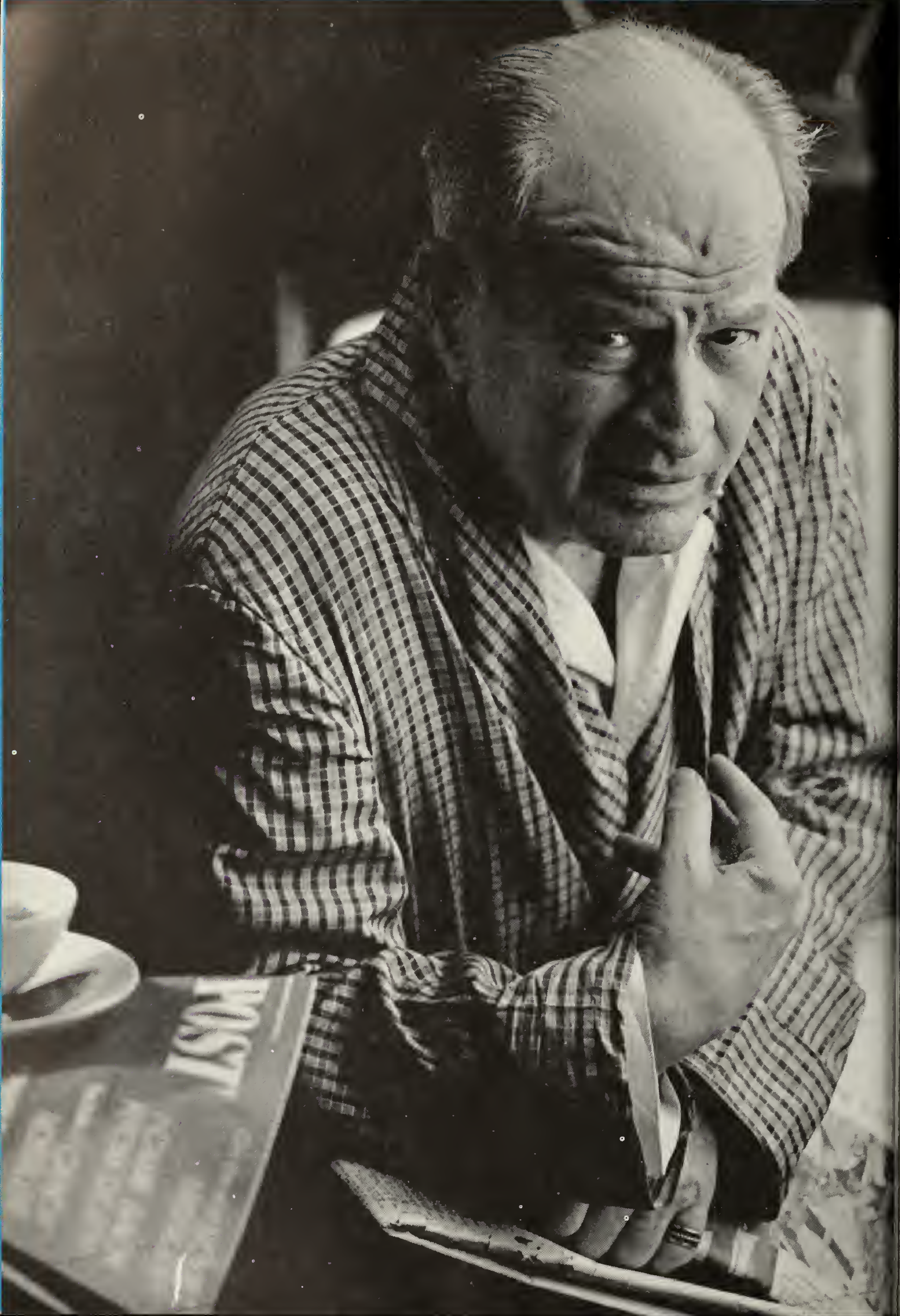

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Contraindications: Barbiturates should not be administered to anyone with a history of porphyria, nor should they be given in the presence of uncontrolled pain, because excitement may result.

Warning: May be habit-forming.

Precautions: Tuinal should be used cautiously in patients with decreased liver function, since prolongation of effect may occur.

Adverse Reactions: Idiosyncrasy, such as excitement, hangover, or pain, may appear. Hypersensitivity reactions occur in some patients, especially in those with asthma, urticaria, or angioneurotic edema.

Dosage: 1½ to 3 grains at bedtime.

Supplied: ¾, 1½, and 3-grain Pulvules®.

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'Thorazine' is useful as a specific adjuvant in the above named conditions.

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For a comprehensive presentation of 'Thorazine' prescribing information and side effects reported with phenothiazine derivatives, please refer to SK&F literature or *PDR.*

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A continuous climate for ulcer healing

(not simply episodic reduction of secretion or motility)

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Tablets
Each swallow tablet contains: orphenadrine hydrochloride, 25 mg.; bismuth aluminate, 25 mg.; magnesium oxide, 45 mg.; aluminum hydroxide—magnesium carbonate (as co-precipitate), 500 mg.

Good-Tasting Liquid
Each tablespoon (15 cc.) contains: orphenadrine hydrochloride, 25 mg.; bismuth aluminate, 50 mg.; aluminum hydroxide—magnesium carbonate (as co-precipitate), 918 mg.

Dosage: 1 or 2 tablets or 1 or 2 tablespoons 3 times daily.

Supplied: In bottles of 100 tablets or 12 fluid oz..

Side Effects: Doses in excess of 6 tablets or 6 tablespoons daily may produce dryness of mouth or blurring of vision. Other possible side actions include: tachycardia, palpitation, urinary hesitancy or retention, dilatation of the pupil, increased ocular tension, weakness, nausea, vomiting, headache, dizziness, constipation, drowsiness, urticaria and other dermatoses. Infrequently, an elderly patient may experience some degree of mental confusion.

Contraindicated: In glaucoma, pyloric or duodenal obstruction, stenosing peptic ulcers, prostatic hypertrophy or obstruction at the bladder neck, achalasia and myasthenia gravis.

References: 1. McHardy, G. G., Judice, R. C., McHardy, R. J., and Cradic, H.: Southern Med. J. 59:459 (April) 1966. 2. Slanger, A.: Western Med. 6:205, 1965.

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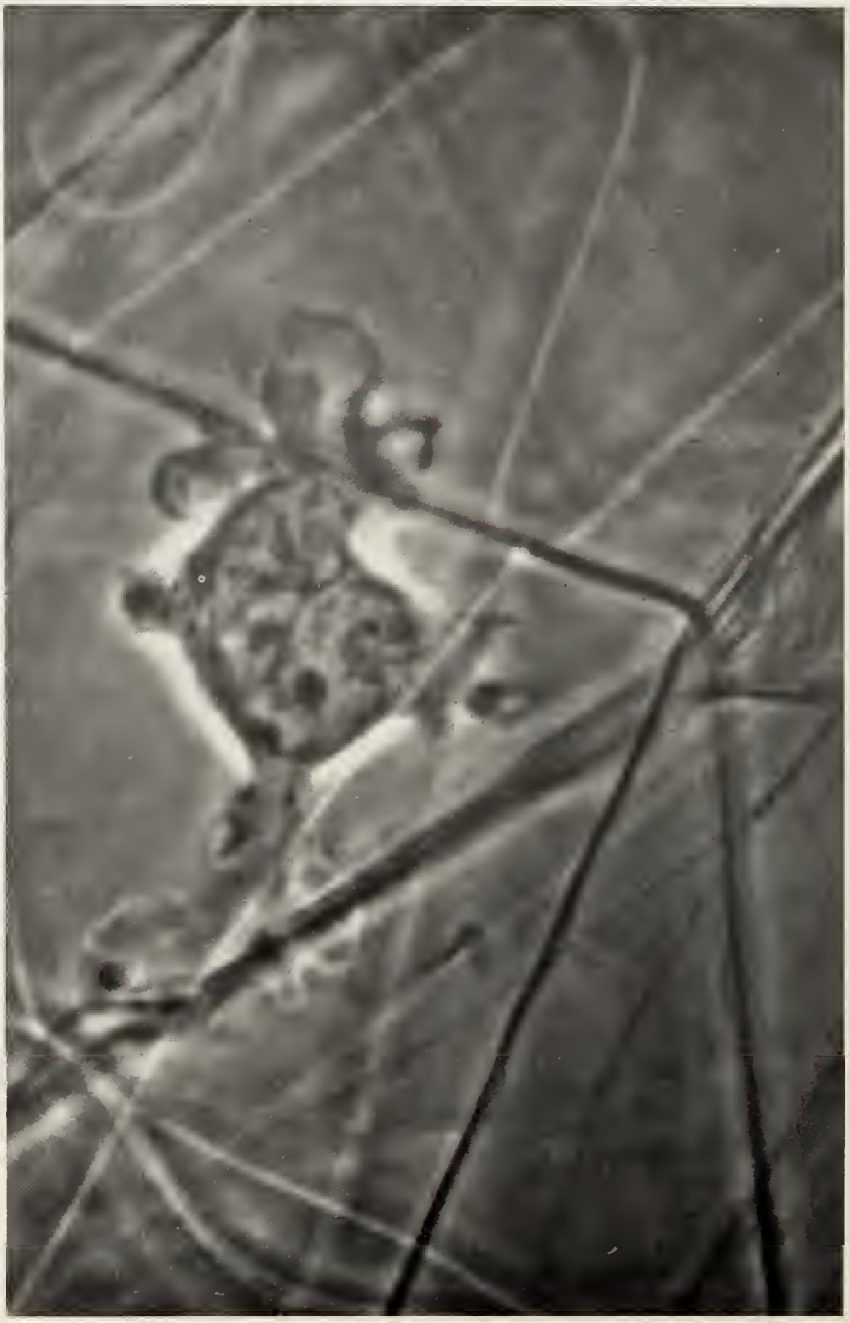
INFLAMMATION:

A cellular fight for life

A SYNTEX REPORT based on recently developed hypotheses about topical corticosteroids, including the cellular theories of inflammation by Thomas F. Dougherty, Ph.D., University of Utah.

You are looking at a fibroblast fighting for life. This cell—one of the most common found in connective tissue—has literally been poisoned by cytotoxins released from other cells that have ruptured. Soon, if the abnormal activity of this fibroblast does not cease, it, too, will rupture and die—one more casualty in the inflammatory wave of destruction precipitated by injury.

Until a short time ago no one had ever witnessed such a scene at the cellular level. Now, through advanced cinemicrographic techniques, it is possible to view and photograph the inflammatory process as produced experimentally in living animal tissue. This method permits new insight into the mechanism of inflammation and the role of corticosteroids in therapeutic management. Equally important, these techniques shed new light on factors that may make one corticosteroid more effective than another—factors that can be correlated with other chemical, biologic, and clinical parameters.

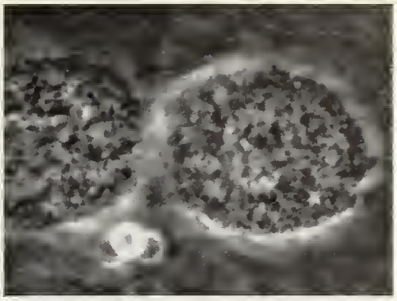


Visual evidence of how corticosteroids influence the inflammatory reaction

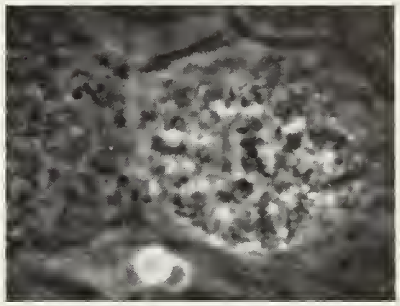
Working with phase-contrast cinemicrography on living animal tissue, Doctors Thomas F. Dougherty and David Berliner of the University of Utah College of Medicine have actually filmed cellular events that occur during the inflammatory reaction. This remarkable study* and additional work by these investigators, as well as by others, have established a new theoretical biologic basis for the antiinflammatory effect of the corticosteroids. (It must be noted that other theories, such as the lysosome or so-called "suicide bag" theory, have been postulated, although it is quite likely that there are more similarities than differences among the various theoretical models.)

The inflammatory wave of destruction

In this investigation an injurious injection of gelatin is used to set off an inflammatory reaction in living mouse tissue. What follows is a wave of destructive cellular activity that comprises the inflammatory response to injury. Mast cells (which contain heparin, serotonin and histamine) take up water, swell and rupture, releasing their contents, which are toxic outside the mast cell wall. These toxins, in turn, cause disintegration of other cells (such as fibroblasts) and the release of additional toxic material. Capillaries, too, take up water and leak unformed blood elements, causing edema. And polymorphonuclears, lymphocytes and perithelial cells invade the inflamed site. As a result of all these changes, the cellular environment reaches a state of turmoil.



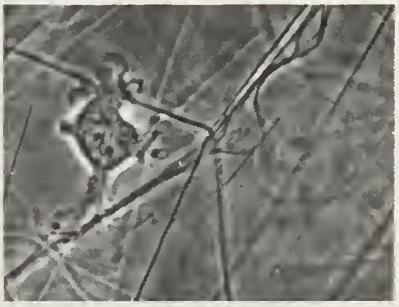
Phase-contrast microscopy showing mast cell before injury.



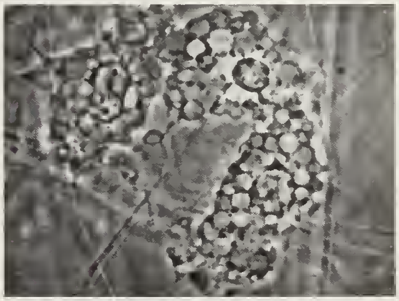
Mast cell (after injury) has broken up and released cytotoxins.

How corticosteroids change the picture

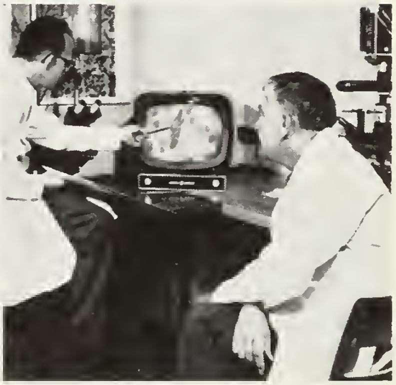
Corticosteroids appear to virtually stop the abnormal cellular activity that constitutes the inflammatory reaction. This permits the body's natural resources to clear up the inflamed area and repair the damaged tissue. This interpretation is supported by the fact that when the injurious gelatin solution is injected simultaneously with a corticosteroid – Synalar (fluocinolone acetonide) – the inflammatory pattern simply does not develop.



Fibroblast in high state of activity, much distorted.



Mast cells showing effects of corticosteroid action: cells are normal in size, shape and activity.



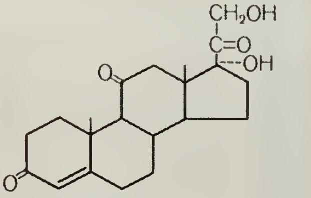
In summarizing his study Doctor Dougherty states: "...we also feel this work may explain why one corticosteroid helps a patient more rapidly and effectively than another. If it does, it is because one corticosteroid is the fastest, most effective inhibitor of the series of inflammatory events at the tissue level."

**A New View of Corticosteroid Action in Inflammatory Dermatoses,* a film based on this study, is now available from your Syntex representative.

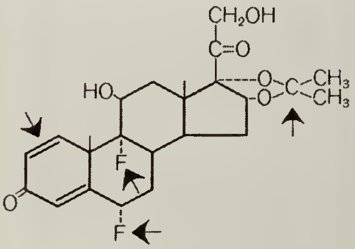
See last page for contraindications, precautions, side effects and dosage.

How advances in chemical design have achieved greater steroid potency

The chemical modification of corticosteroid molecules from the advent of hydrocortisone to the development of Synalar (fluocinolone acetonide) is a prime example of how biochemists can "design" to increase therapeutic activity and minimize undesirable side actions. Below, for example, we see the important changes that were made in reference to the hydrocortisone molecule to produce fluocinolone acetonide, one of the most active of all topical corticosteroids. As a result, a 0.01% preparation of Synalar (fluocinolone acetonide) has been reported to do the work of a 1% hydrocortisone product containing 100 times more cortiscosteroid. And it can often do it more effectively.



Hydrocortisone



Fluocinolone Acetonide (Synalar)

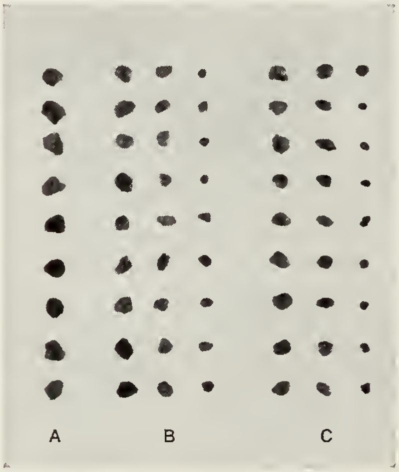
☐ *a double bond between carbons 1 and 2*

☐ *fluorine substitutions at* both *the 6-α, and the 9-α positions*

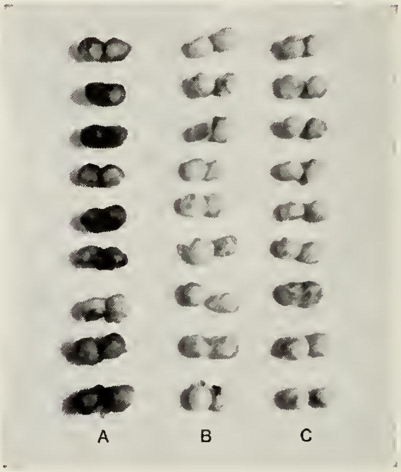
☐ *the addition of the acetonide at the 16-α, 17-α positions, thus providing one of the most potent topical corticosteroids available.*

How bioassay tests are used to "predict" therapeutic potential

Biologic assays are another tool used by researchers to help establish the relative activity of corticosteroids. To date no single method of assaying corticosteroid activity has emerged as the ideal "yardstick" for predicting therapeutic potential. Taken together, however, these methods have proved useful. When such tests are run on various corticosteroids, a definite order of corticosteroid activity becomes evident. Compounds with the highest order of activity may be expected to merit clinical trial to establish their high therapeutic potential. When assayed by these methods, fluocinolone acetonide (Synalar) emerges as one of the most active topical corticosteroids, milligram for milligram, available for clinical application today.



The Thymus Involution Assay[1-4] is run on adrenalectomized rats. The sizes of the glands are measured, and the degree of involution caused by the steroid is determined as an indication of its potency. In the above photo, the comparative involution of thymus glands achieved with hydrocortisone and Synalar (fluocinolone acetonide) is shown. Untreated controls (A) show normal size. Group B – injected with 1, 2 and 4 mg. of hydrocortisone – show progressively smaller thymuses as does Group C – injected with fluocinolone acetonide – but with only 1/500th the dose of hydrocortisone.



The Antigranuloma Assay[1-4] also utilizes adrenalectomized rats. Granulomas are induced by subcutaneous implantation of cotton pellets on either side of the thorax. The degree of granuloma inhibition achieved by a steroid reflects its potency. The above photo shows the inhibition of granuloma formation achieved with hydrocortisone and Synalar (fluocinolone acetonide). Untreated controls (A) show large, red granulomas adhering to the pellets. Group B, receiving hydrocortisone and Group C, receiving fluocinolone acetonide, show little, if any, granuloma formation. Fluocinolone acetonide produced the same effect as hydrocortisone with only 1/500th the dose. This assay, as well as the thymus involution assay, measures systemic rather than topical corticosteroid activity. Nevertheless, results by these methods correlate well with other assays and with the milligram potencies of topical steroids in current clinical use.

Worldwide clinical experience confirms the predictable therapeutic potential of Synalar

It is particularly gratifying that the promise of the advanced chemical design and high order of bioassay activity of Synalar (fluocinolone acetonide) has been confirmed by widespread therapeutic application. Indeed, the impressive clinical response rate of Synalar has been documented in no fewer than 232 papers from 22 countries.

Representative Clinical Results with Synalar*

Efficacy Documented in over 4,000 Patients

Condition	Number of Publications	Number of Patients	Significant Improvement†
Contact Dermatitis	27	750	713
Eczematous Dermatitis	21	472	409
Seborrheic Dermatitis	18	442	426
Atopic Dermatitis	24	460	426
Psoriasis	36	1,699	1,510
Neurodermatitis	18	351	324
Total	144	4,174	3,808

*Complete bibliography on request.

†Expressed by the authors as excellent, very good, good, complete remission of inflammation, etc.

PRESCRIBING INFORMATION

For initiation of therapy: Cream 0.025%, 5 and 15 Gm. tubes, 425 Gm. jars; *for emollient effect:* Ointment 0.025%, 15 Gm. tubes; *for maintenance therapy:* Cream 0.01%, 15 and 45 Gm. tubes, 120 Gm. jars; *for intertriginous or hairy sites:* Solution 0.01%, 20 cc. and 60 cc. plastic squeeze bottles; *for infected inflammatory dermatoses:* Neo-Synalar® Cream (0.025% fluocinolone acetonide, neomycin sulfate, equivalent to 0.35% neomycin base), 5 and 15 Gm. tubes.

CONTRAINDICATIONS: Tuberculous, fungal, and most viral lesions of the skin, (including herpes simplex, vaccinia, and varicella). Not for ophthalmic use. Contraindicated in individuals with a history of hypersensitivity to any of the components. PRECAUTIONS: Synalar preparations are virtually nonsensitizing and nonirritating. However, the solution may produce burning or stinging when applied to denuded or fissured areas. In some patients with dry lesions, the solution may increase dryness, scaling or itching. While topical steroids have not been reported to have an adverse effect on pregnancy, the safety of their use on pregnant females has not absolutely been established. Therefore, they should not be used extensively on pregnant patients, in large amounts, or for prolonged periods of time. Prolonged use of any antibiotic may result in overgrowth of nonsusceptible organisms; if this occurs, appropriate therapy should be instituted. When severe local infection or systemic infection exists, the use of systemic antibiotics should be considered, based on susceptibility testing. SIDE EFFECTS: Side effects are not ordinarily encountered with topically applied corticosteroids. As with all drugs, however, a few patients may react unfavorably to Synalar under certain conditions. The neomycin in Neo-Synalar Cream rarely produces allergic reactions.

REFERENCES: 1. Lerner, L. J., Bianchi, A., Turkheimer, A. R., Singer, F. M., and Borman, A.: Anti-inflammatory steroids: potency, duration and modification of activities. Ann NY Acad Sci 116:1071 (Aug. 27) 1964. 2. Idem: Comparison of anti-granuloma, thymolytic and glucocorticoid activities of anti-inflammatory steroids. Proc Soc Exp Biol Med 116:385 (June) 1964. 3. Ringler, A.: Activities of adrenocorticosteroids in experimental animals and man, in Dorfman, R. I.: Methods of hormone research, New York, Academic Press, 1964. vol. III. pp. 234-280. 4. Gubersky, V. R.: To be published.

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Contraindications: Contraindicated in individuals who have shown hypersensitivity to any of its components. Not recommended for prophylaxis or in the management of infectious processes which may require more than 10 days of continuous therapy. If clinical judgement dictates therapy for longer periods, serial monitoring of liver function is recommended. Not recommended for subjects who have shown abnormal liver function tests, or hepatotoxic reactions to triacetyloleandomycin.

Precautions and Adverse Reactions: Triacetyloleandomycin, administered to adults in daily oral doses of 1.0 gm. for 10 or more days, may produce hepatic dysfunction and jaundice. Adults requiring 3 gm. of Signemycin initially should have liver function followed carefully and the dosage should be reduced as promptly as possible to the usual recommended range of 1.0 to 2.0 gm. per day. Present clinical experience indicates that the observed changes in liver function are reversible after discontinuation of the drug. Use with caution in lower than usual doses in cases with renal impairment to avoid accumulation of tetracycline and possible liver toxicity. If therapy is prolonged under such circumstances, tetracycline serum levels may be advisable. In long term therapy or with intensive treatment or in known or suspected renal dysfunction, periodic laboratory evaluation of the hematopoietic, renal and hepatic systems should be done. Formation of an apparently harmless calcium complex with tetracycline in any bone forming tissue may occur. Use of tetracycline during tooth development (3rd trimester of pregnancy, infancy and early childhood) may cause discoloration of the teeth. Reversible increased intracranial pressure due to an unknown mechanism has been observed occasionally in infants receiving tetracycline. Glossitis, stomatitis, proctitis, nausea, diarrhea, vaginitis and definite allergic reactions occur rarely. Severe anaphylactoid reactions have been reported as due to triacetyloleandomycin. Photosensitivity and photoallergic reactions (due to the tetracycline) occur rarely. Medication should be discontinued when evidence of significant adverse side effects or reaction is present. Patients should be carefully observed for evidence of overgrowth of nonsusceptible organisms including fungi, which occurs occasionally, and which indicates this drug should be discontinued and appropriate therapy instituted. Steps should be taken to avoid masking syphilis when treating gonorrhea.

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ARTIFICAL PNEUMOTHORAX—OBSEQUIES

WILLIAM ATMAR SMITH, M. D.
Charleston, S. C.

The introduction of air into the pleural cavity for the treatment of lung disease was suggested in the first decade of the nineteenth century, soon after the discovery of the elasticity of the lungs. This theoretical consideration gained credence by observers throughout the years, especially as it was noted that in cases of pulmonary tuberculosis, after the development of spontaneous pneumothorax the patient's symptoms ameliorated, or for a short time, disappeared.

Sporadic interest was aroused in the subject from time to time by highly regarded physicians and experimentors of the century who advised the use of artificial pneumothorax in the treatment of tuberculosis, but few attempted it. With little knowledge of asepsis, perhaps they were wise. Without x-ray control and without the use of a water manometer the procedure might have been longer delayed in its acceptance. However, under the leadership of Forlanini of Italy (1894), John B. Murphy (1898), Lemke (1901) of this country, and many other able physicians in Germany, France, and America, artificial pneumothorax "got off the ground." It was not until the early 1920's that it won recognition throughout the world as second in importance only to rest therapy in the treatment of tuberculosis.

It is interesting to record that in 1911 this author in his medical infancy heard Mary Lapham address a regional medical meeting on the treatment of tuberculosis with artificial pneumothorax. He was not impressed, but in 1926 he made a modest contribution on the same subject at the Annual Convention of the South Carolina Medical Association. It was discussed by the official authority on tuberculosis in South Carolina, who stated that he had tried the method and found it "ineffective, unwise and dangerous." In later years, he reversed his opinion.

In 1927, Clive Riviere, distinguished London physician and author, in the second edition of his book on artificial pneumtohorax wrote:

"No more hopeful ray of sunshine has ever come to illumine the dark kingdoms of disease than that introduced into the path of the consumptive through the discovery of artificial pneumothorax." In poetic fashion he was emphasizing the fact that far advanced cases with a hopeless outlook were amenable to treatment. Over a period of 30 years (1920 to 1950), this comparatively simple procedure, used alone or combined with pneumonolysis and phrenic nerve operations, restored thousands of hopelessly ill persons to health and productivity. To physicians of recent vintage engrossed in studying the efficacy of specific drugs and antibiotics, it might appear incredible that the introduction of air into a patient's pleural cavity could arrest or cure a severe infectious disease. It must be admitted that however potent and valuable, all was not perfect in the use of pneumothorax. There were dangers and complications. In the carefully selected cases these were rare; in others, the physician's judgment was sometimes overcome by his desire to help and by his compassion for the pleading patient. Among the dangers always listed were pleural shock and gas embolism, perhaps one and the same, and perforation of the lung, resulting in broncho-pleural fistula. Other complications of a less serious nature were for the most part related to pleural reactions, and the formation of fluid. Sometimes empyema, and as a terminal event, obliterative pleuritus and fibrothorax occurred; in many instances it had no serious implications as the disease was often arrested. It should be pointed out that the frequency of these pleural manifestations made necessary the use of pneumoperitoneum, usually a less effective method of collapse therapy.

There were many triumphs justly credited to pneumotherapy, and widely publicized. The purpose of this report is, however, to record two outstanding failures. Both occurred about 30 years ago. Both presented unusual developments never seen before and never found reported in the literature. The first was due to an error in judgment, the second to an error in technique. Both patients had severe tuberculosis.

The first patient had bilateral, advanced disease and by no standards was he a good risk. The patient and his wife pleaded that an attempt be made and expressed willingness to face disaster if it was unsuccessful. After being importuned constantly by the patient and his wife the doctor yielded, with the vision of possible success with pneumotherapy on one side, and a later bilateral compression, with which he had had some satisfactory results. Air to the amount of 200 ml was injected into the right pleural cavity. In about 24 hours, subcutaneous emphysema was noticed. In another 24 hours the scrotum began to swell and soon looked like a moderate size circus balloon. Air was in the scrotal sac as well as in the subcutaneous covering. It was believed the air had traveled down alongside the spermatic cords. (Figure 1)

It might be justifiably surmised that when the air was injected into the pleural cavity a small adhesion attached to the lung was severed and enabled air to escape in large amounts. The high positive pressure thus produced in the pleural space may have forced air through the needle track to the subcutaneous tissues. (Broncho-pleural fistula).

In the second patient (Figure 2) artificial pneumothorax was clearly indicated. It was one of predominantly unilateral disease. Pneumothorax was induced and a good collapse of the lung obtained, except in the apex where pleural adhesion interfered with orderly compression. (See Figure 3)

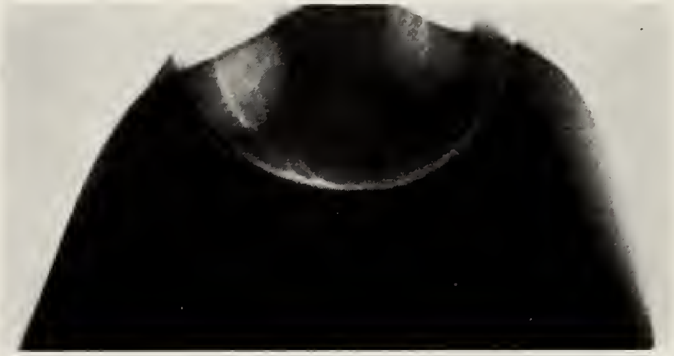

Figure 1

This film, taken three days after the development of the broncho-pleural fistula, shows the scrotal sac distended with air with the more dense testicles fairly well outlined.

The pre-operative chest films showed bilateral deposits more extensive on the right.

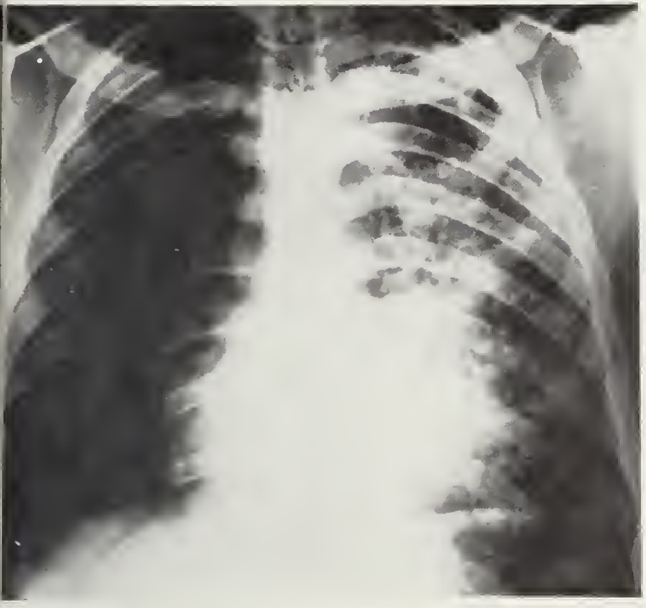

Figure 2

Chest film showing tuberculous disease of the lung predominantly on the left side prior to pneumothorax.

Thoroscopy was done and an attempt made to separate the adhesions from the wall of the thorax. In the manipulations a bronchus was evidently perforated, resulting in a broncho-pleural fistula. Underwater drainage was established but extensive subcutaneous emphysema appeared. The great positive pressure in the thoracic cavity resulted in enormous "wind tumors" over the chest wall. (See Figure 4).

With all of this disability the patient, surprisingly, lived two months. Autopsy revealed a fairly large broncho-pleural fistula and extensive caseous tuberculosis in the partially collapsed lung as well as in the opposite one, with miliary deposits abounding in both pleurae. The "gas bag" results do not detract from the innate value of artificial pneumothorax. They probably reflect overzealous medical effort, somewhat like using a sand bag to stem a torrent.

Artificial Pneumothorax in Massive Collapse of the Lung

It was inevitable that physicians experienced and enthusiastic about artificial pneumothorax in tuberculosis would put it to use in the treatment of other pulmonary diseases. In the second and third decades of the century bronchoscopy was in its early stage of development and skilled bronchoscopists were not available. Anesthesia had not reached its present stage of perfection, nor had tracheal and bronchial "toilet" become so highly appreciated. As a consequence, so-called "post-operative pneumonia," or, more accurately, post-operative massive atelectasis, often developed.

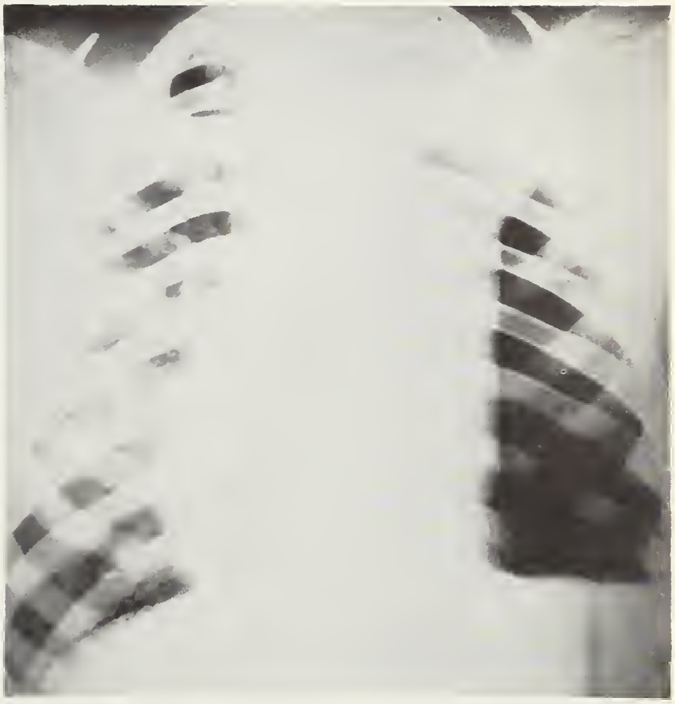

Figure 3

Pneumothorax, left, with the upper portion of lung adherent to the chest wall.

At this time, the type of bronchial obstruction not due to a foreign body was not well understood, nor were there any antibiotics to cover diagnostic errors. Both post-operative massive collapse and obstruction were the result of broncho-stenosis due to inspissated material. Neither of these conditions should be confused with massive pneumonia, a product of the once deadly pneumococcus, and due to the filling of the alveoli, small bronchi and the entire bronchial tree with thick exudate. This disease is not now found very often.

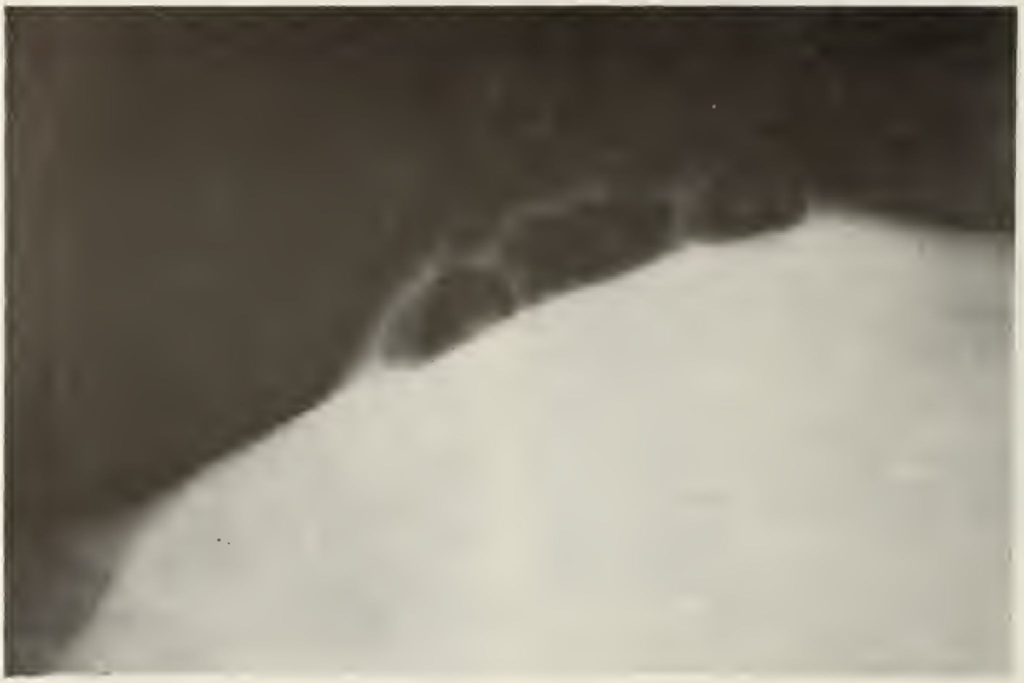

Figure 4

Lateral view of chest after development of broncho-pleural fistula. "Wind Tumors."

This observer learned of the successful use of artificial pneumothorax in post-operative massive collapse from another physician. Because this was not an original idea of the author and because he has been unable to find it published in the literature, he regrets that he cannot give proper credit. This procedure probably saved the lives of two people.

The first patient was a young man who had had an appendectomy the day before and was thought by the surgeon to have post-operative pneumonia. The patient was sitting up in bed in great respiratory distress. It was noted that there was little movement of the right side of the thorax and apex of the heart was in the right mid-clavicular line. Impaired resonance and rales were found over the right side of the chest. It was felt that the most likely diagnosis was massive collapse of the lung; artificial pneumothorax was suggested. The surgeon acquiesced. No bronchoscopist was available. With an old Floyd pneumothorax apparatus the intrapleural manometric reading was taken and found to be very negative. When 300 ml of air were introduced into the pleural cavity within a few minutes the young man coughed up a moderate amount of thick secretion. The change in his condition was miraculous. Breathing was no longer difficult and he felt well again.

The second patient, seen several months later, (See Figure 5) had been in the hospital for about three days because of hemoptysis, and had been given frequent small doses of morphine to control the bleeding. He, too, was sitting up in bed in severe respiratory distress and was receiving oxygen through a funnel held over his nose. He was cyanotic, sweating and looked ghastly. The physical examination showed little or no movement of the left chest wall and the apex beat of the heart was in the left mid-axillary line. Resonance and breath sounds were impaired over the entire left chest. The family was advised that the patient had massive collapse of the left lung, probably due to clotted blood in the bronchi. Artificial pneumothorax was advised now with more confidence, though it was added that there might be some slight risk. They said, "do anything you want. He is

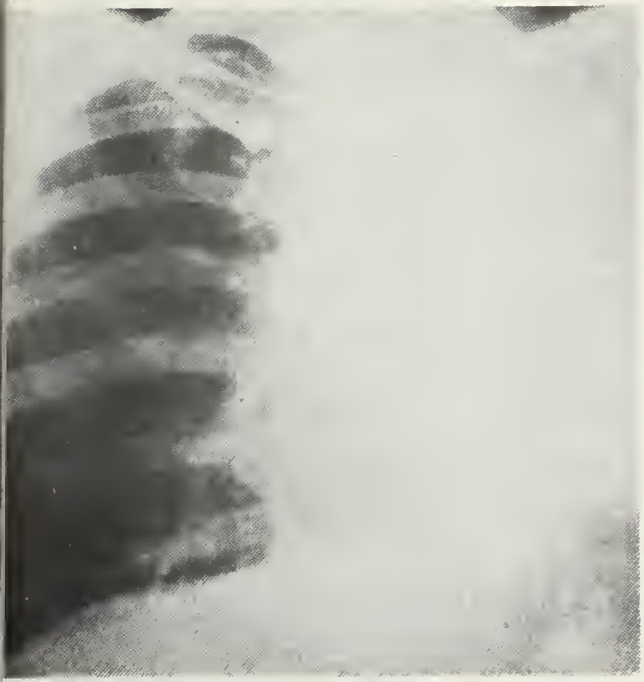

Figure 5

Post-operative massive atelectasis. The film shows marked density of the right lung with considerable displacement of the heart to that side.

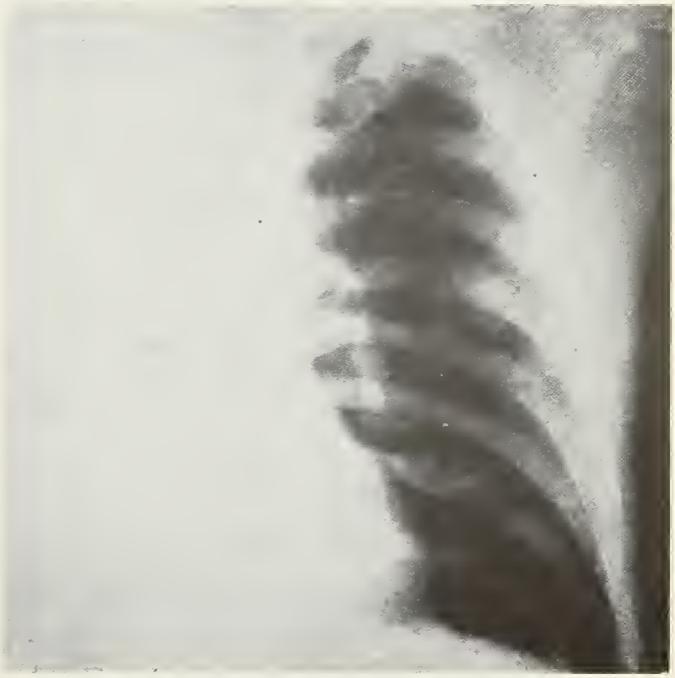

Figure 6

Massive collapse of right lung due to blockade of right main bronchus and communicating bronchi with blood cast.

going to die anyway." The same procedure was carried out as in the preceding case. After a negative monometric reading, 300 ml of air were introduced. In a few moments the patient coughed up a blood cast of the main bronchus and a batch of communicating bronchi. The result was again miraculous. All symptoms and signs cleared almost at once.

Later studies revealed an old fibrosed tuberculous lesion in the apex of the left lung, evidently the source of the bleeding. There had been no other symptoms and the patient remained in good health for many years.

Obsequies

Pneumotherapy is dead. The "hopeful ray of sunshine" which came to illumine lives devastated by so relentless a disease as tuberculosis has faded. It saved many, shortened the days of a few, but overall was the greatest contribution to the treatment of tuberculous, second only to the introduction of rest therapy by Brehmer.

However, in its passing there are no mourners. It accomplished its task in a difficult period of medical history but no one weeps for its return. The "sunshine" it brought has been overshadowed by a brilliant replacement by effective drugs and selective surgery. It is not likely that it will ever again be put into use to relieve post-operative massive atelectasis if modern preventive techniques are used. Perhaps this disease may now be included in David Riesman's list of "Deceased Diseases."

So after many years of effective service in helping to arrest, cure, and prevent the onslaughts of the "captain of the men of death" pneumotherapy is buried in the cemetary of medical history.

NUTRITIONAL DEFICIENCIES OF LOW INCOME MOTHERS IN THE COLUMBIA, S. C., AREA

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Columbia, S. C.

In an earlier publication the authors reported on a nutritional survey in the northwestern portion of the State of South Carolina.[1] The present study is concerned with a central portion of the State and incorporates additional criteria for the evaluation of the nutritional status of pregnant women.

In the past, riboflavin deficiency has been widespread in the South, and the need to maintain an adequate intake of riboflavin is well established.[1-5] Maintaining an adequate intake of ascorbic acid is equally important.[1, 4, 12-15] Anemia is common under the physiologic stress of pregnancy and the role of iron in this connection is firmly established.[1, 5, 21]

Thiamine deficiency produces the symptom complex of beri-beri.[16] Three forms of this disease are known; wet beri-beri, characterized by generalized edema with a liability to heart failure and sudden death;[16] dry beri-beri which is a chronic nutritional polyneuropathy associated with degenerative changes in the peripheral nerves;[17] infantile beri-beri, a chronic marasmus often associated with sudden heart failure.[16] Thiamine is an essential co-enzyme of the glucose oxidative pathway.[18] Dick *et al* observed that the mean thiamine requirement for adolescent boys is 1.41 mg per day.[19] Evidence is available to indicate that there is little capacity on the part of the animal body to store thiamine in large amounts.[17] It is essential that a uniform and adequate thiamine intake be maintained for the prevention of these extreme deficiency conditions and also the prevention of subclinical conditions which are less well-defined.

Pellagra, the clinical syndrome associated with niacin deficiency, was responsible for thousands of deaths annually in the South.[17] Chronic pellegra is characterized by erythema which is generally bilaterally symmetrical and attacks the back of the hands, knees, elbows, dorsum of the feet and ankles.[17] These areas become permanently pigmented, and either become atrophied or roughened.[17] Epithelial lesions are also noted in the digestive tract, particularly on the tongue and rectum.[17] The organic nervous lesions of pellagra include myelin degeneration of the spinal fibers and degeneration of the axis cylinders of the pyramidal cells of the cortex.[17] Gabuzda *et al* report an increase in excretion of niacin metabolites in patients with cirrhosis of the liver associated with alcoholism.[20] Niacin also depresses the plasma cholesterol in experimental animals.[16] During periods of physiologic stress, such as pregnancy, the requirement for niacin is augmented.

The present study was undertaken (1) to determine if malnutrition of low income mothers in the Columbia, South Carolina area is still a public health problem; (2) to determine which nutrients are most frequently deficient in the diets of these women.

Methods

The women included in this study were from low income families in the central part of South Carolina and had reported to the Richland County Health Department for maternal care. Both Negro and white women,

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The Williams-Waterman Fund for the Combat of Dietary Disease, Research Corporation, New York, supplemented the funds of the University of South Carolina for this study.

in their second or third trimester of pregnancy were included in the study.

An experienced interviewer used the 24-hour recall technique[6] to obtain information on the dietary intake. This was carried out in a separate room, with only the woman interviewer and patient present. Conditions were relaxed, and every effort was made to avoid embarrassment and to gain the confidence and cooperation of the patient. The daily intake of specific nutrients was then computed by referring to the United States Department of Agriculture Home and Garden Bulletin No. 72, "Nutritive Value of Foods." The adequacy of the diets was determined by comparison with the recommended dietary allowances of Publication 1146, "Dietary Allowances," National Research Council.

Ten ml of blood were collected from each woman interviewed. The blood was drawn into 10 ml vacutainer tubes which contained 10 mg EDTA in powdered form. The tubes were transported immediately to the laboratory for analysis.

A hemoglobin determination was performed on .02 ml of blood by the cyanomethhemoglobin method described by Hainline.[7] In order to check the hemoglobin values and to establish the volume of packed red cells, a microhematocrit determination was performed.[8] The vitamin C content of whole blood was determined on 5 ml by a modification of the photometric procedure described by Lowry and associates.[9] The riboflavin content of whole blood was assessed on 5 ml by the fluorometric procedure described by Burch.[10] The total iron content of whole blood was determined by a modification of the procedure described by Wong.[22]

Results and Conclusions

The nutritional status of 95 expectant mothers in the Columbia, South Carolina area was investigated in this study. None of the subjects studied consumed a diet that could be considered fully adequate. The intake of some of the subjects met the recommended dietary allowances of the National Research Council[11] for one or two nutrients; however, their diets were very deficient in other respects.

The percentage of subjects having adequate intakes of certain nutrients in both the present study and a previous study of the Greenville, South Carolina area[1] is presented in graphic

Figure 1

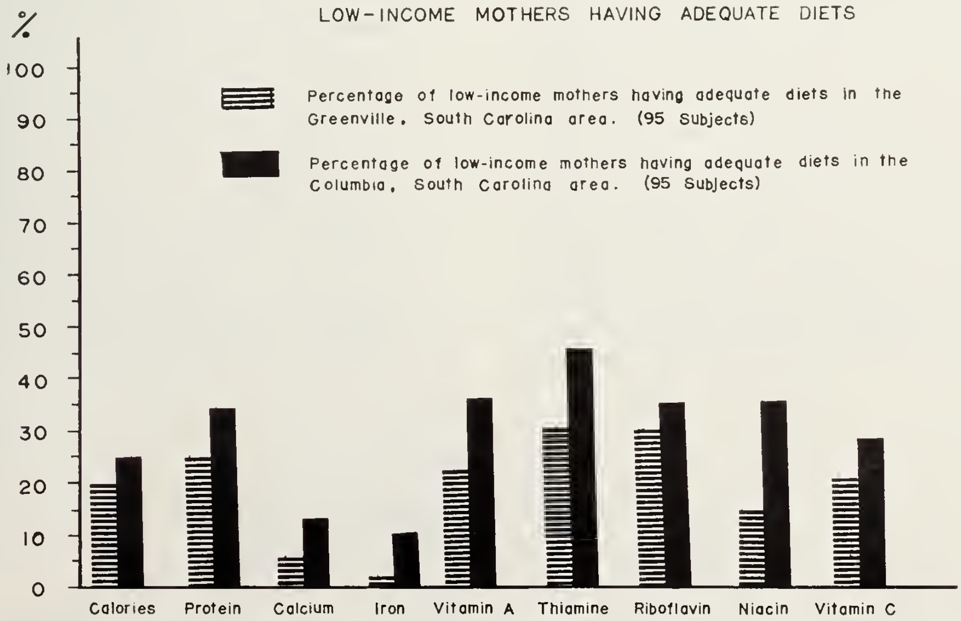


TABLE I

NUTRIENT INTAKE AND BLOOD LEVELS OF LOW-INCOME PREGNANT WOMEN

	Number of subjects in group	Number of subjects below normal*	Percentage of subjects below normal*
Intake of riboflavin	95	63	65
Blood value of riboflavin	93	2	2
Intake and blood value of riboflavin	93	2	2
Intake of vitamin C	95	68	72
Blood value of vitamin C	90	53	59
Intake and blood value of vitamin C	90	42	47
Intake of iron	95	86	81
Intake of protein	95	63	66
Hemoglobin	69	39	57
Intake of iron and hemoglobin value	69	36	52
Intake of both protein and iron and hemoglobin value	69	30	43
Blood value of total iron	17	16	94

* Values which were recognized as the minimum for normal were: riboflavin, 8.7mu; vitamin C, 0.9 mg; and hemoglobin, 11.7 grams per 100 ml of whole blood. Recommended Dietary Allowances, NRC, were used for intake.

form in Figure I. It appears that the nutrient intake of low-income mothers in the Columbia area is somewhat better than the intakes found for similar subjects in the Greenville area. This augmented intake is due in many cases to a better quality diet, rather than to an increase in the amount of food consumption, as indicated by a comparison of the caloric intakes.

The relationship between the intake and the blood levels of these subjects is shown in Table I. It can be observed that in almost all instances, except for the amount of circulating iron, the percentage of subjects below normal in their circulating nutrient content is lower than the percentage of subjects below normal in nutrient intake. This difference can be explained by the fact that intakes were calculated on the basis of one day, and the National Research Council recommendations, while the blood level was a reflection of nutritional status over a longer period of time.

Approximately 60 percent of the subjects studied were found to have inadequate venous blood ascorbic acid levels. The hemoglobin value and total circulating iron content of the patients studied was found to be inadequate in 57% and 94% of the cases, respectively. Perhaps it is significant to note that iron is the most deficient nutrient in the diets of these patients.

The study justifies conclusions as follows:

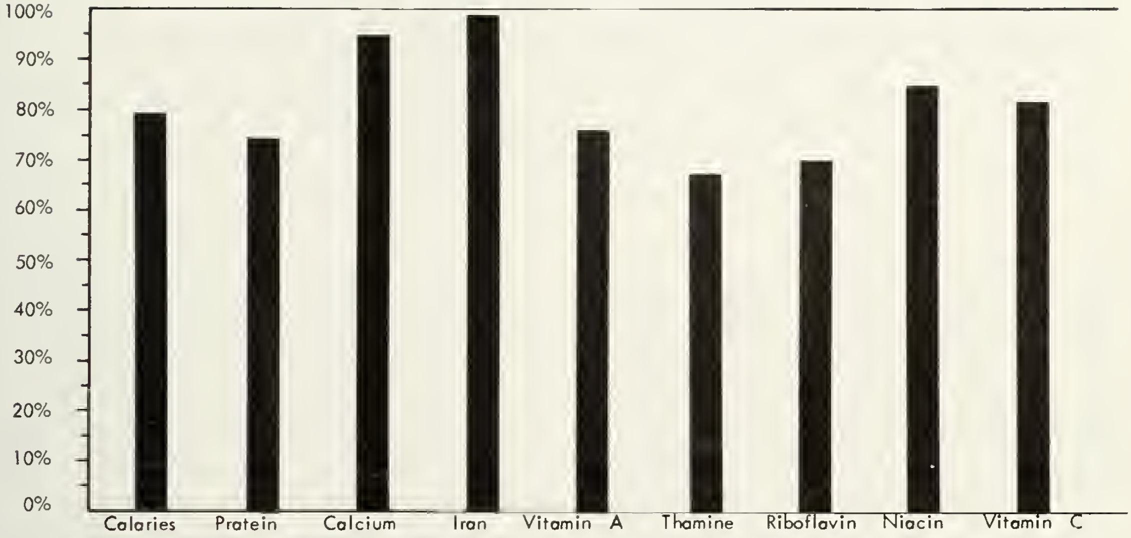
1. Malnutrition is widespread among low-income mothers in the Columbia, South Carolina area and is still a public health problem.
2. The nutrients most frequently inadequate in the diets are calcium, iron, niacin and ascorbic acid.
3. There is a need for further study and action, with efforts directed towards incorporating more high nutritive quality foods and essential nutrients in the diets of these low-income mothers.

Acknowledgment

The authors gratefully acknowledge the invaluable assistance of the staff of the Richland County Health Department, where samples of venous blood were drawn for the study. A separate room was provided for interviewing the mothers, and every effort was made to cooperate.

Figure 1

PERCENTAGE OF WOMEN HAVING INADEQUATE INTAKES



(GREENVILLE AREA)

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CURRENT CONCEPTS OF IMMUNIZATION

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To say that there is one and only one correct method of immunizing would be absurd. Adequate immunization may be carried out by a number of schemes. The suggestions presented in this paper are an attempt to set down an orderly and adequate immunization program as suggested by a recent Symposium on Immunization, sponsored by the AMA and the Communicable Disease Center of the U. S. Public Health Service in Atlanta, Georgia.

In past years, inadequate or "under-immunization" has been a problem. It is still a problem, but, in some areas too frequent injections of immunizing agents, or "over-immunization" has begun to present itself as a cause for concern.

The following is presented as a hopeful compromise between the two above mentioned extremes.

Diphtheria—Pertussis—Tetanus

The incidence of these infections has been declining steadily, with tetanus declining more slowly than the other two. Neonatal tetanus is still seen too frequently. All three diseases are encountered more frequently in childhood and in the South. The only method of control is by immunization, beginning in infancy.

Diphtheria and tetanus toxoids and pertussis vaccine combined (DPT), are second only to smallpox vaccine in frequency of use. Initial immunization is recommended at two to three months of age. This is primarily for protection against pertussis. Earlier use is not recommended because of interference with proper immunization by diphtheria and tetanus antibodies received from the infant's mother.

A two-dose schedule is considered to give inadequate protection. Three injections given four to six weeks apart, using alum precipitated vaccine offers good protection.

The child should then receive a reinforcing dose at 18 months of age. This gives a level of immunity ten times that of those not receiving this reinforcing dose. Further boosters should be given at the discretion of the physician, depending on local conditions. It seems wise to give a follow-up booster somewhere between three and six years of age.

After the age of six years, pertussis vaccine should not be given because of the local reaction caused by this substance. A solution consisting of diphtheria and tetanus toxoids only should be substituted for the previously used DPT. If initial immunization is to be carried out in a child over six years of age, two injections of alum precipitated D-T vaccine are sufficient for adequate immunization.

While some physicians have advocated using the "adult" type of D-T toxoid after seven years of age, most authorities agree that after the age of ten years the "adult" type vaccine should be used. This is a solution containing the full dose of tetanus toxoid with a small amount of diphtheria toxoid.

Routine boosters against diphtheria infections may be given as far apart as five years, while intervals between tetanus boosters may be as far apart as ten years.

If the interval between a tetanus booster and an injury is more than one year, another tetanus booster should be administered. Over-immunization should be avoided because of the increase in incidence of local reactions to tetanus toxoid.

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*At the request of the president of the South Carolina Medical Association, Dr. Rheney attended a seminar on immunization as a representative of the Association.

In an unimmunized individual, who for reasons of injury must be given protection, every effort should be made to avoid the use of antitoxin by using tetanus immune globulin in a dose of 250 units, followed by the immediate institution of tetanus immunization with alum precipitated toxoid.

If antitoxin must be used, 3,000 units should be given in the event of immediate treatment and 5 to 6,000 units if the injury is over 48 hours old.

Measles Vaccine

There are two types of measles vaccine, live and inactivated.

Live measles vaccine is further subdivided into three groups, the Edmonston strain A, which is grown in dog kidney tissue, the Edmonston strain B, which is grown in chick tissue, and the Schwartz strain, which is a further attenuated Edmonston strain. All three of these strains may be used with or without gamma globulin. The only advantage of the simultaneous use of gamma globulin is the attenuation of the febrile reaction, and this is not serious in a vast majority of cases.

The antibody curve of all three live virus vaccines follows closely the curve for natural immunity for seven to eight years and presumably for life (whether or not gamma globulin is used); however, the question of lifelong immunity and adult susceptibility must await the passage of time for an informed answer.

Care must be taken in spacing the administration of two different live vaccines. It is known that between six and twelve days after one live vaccine is given there is a rise in interferon in the serum of the recipient.

Two live vaccines should be given simultaneously or at an interval great enough to avoid interference between these two vaccines.

Live measles vaccine is not given in chronic diseases, pregnancy, to patients with untreated active tuberculosis, or to patients taking steroids or methotrexate.

Inactivated measles vaccine is recommended only in selected cases. It offers only short lived immunization and is not very practical. A combination of first the inactivated vaccine followed by the live vaccine has been used by some, but has certain disadvantages (multiple visits, local reactions, swelling, lymphadenopathy, and petechiae) and, generally speaking, has little advantage to offer to the average patient.

Polio Vaccine

There is no vaccine available against any disease that can be called an ideal vaccine, but polio vaccine more nearly approaches this state than any other vaccine.

Both Salk and oral polio vaccine are effective. Neither has any serious side effects. There is no way to prove, beyond a reasonable doubt, that any case of polio has been caused by administration of a vaccine.

The trivalent oral polio vaccine seems to offer more advantages than any other type. It is given at ages two months and four months with an additional dose one year after the second dose. Some recommend a fourth dose at school age.

If immunization is initiated after one year of age, three doses should be given, the third being administered one year following the second.

Trivalent vaccine should be given up to and including patients 18 years of age. After 18 years of age, it is recommended that its use be restricted to those traveling outside the United States, those entering the armed forces, and those in an epidemic polio area.

Smallpox Vaccine

At present this is the most widely used vaccine in the United States.

Possibly because the last authenticated case of smallpox in the United States was in 1949, the question of abandoning the smallpox vaccination as a routine procedure arises repeatedly. For a number of reasons this seems unwise at present.

Smallpox has not been eradicated in endemic areas such as Africa, India, and South America. Travelers from this country to those areas may contact smallpox and return with it to the United States (forged vaccination certificates are not unknown). Once introduced into this country, there are an average of four generations of this disease before it is recognized. For this reason the American Hospital Association recommends pre-employment vaccination or proof of vaccination. Over one-half of hospital employees have never been vaccinated and they are among the first exposed when an undiagnosed case of smallpox is admitted to the hospital.

The only hope of safely eliminating routine smallpox vaccination is to first eradicate smallpox from the remainder of the world. Patients involved in foreign travel should be re-vaccinated every three years.

Vaccination for smallpox is not without risk, but one-third to one-half of complications are preventable by not vaccinating patients or contacts of patients with eczema or malignant diseases. Should complications occur, vaccine immune globulin is available, in limited supply, through the American Red Cross.

Influenza Vaccine

This vaccine was developed in 1940 and has met with varying success depending mostly on whether the vaccine used is effective against the specific virus active at the particular time that it is used.

It is not recommended for general widespread use, but is recommended for the aged, the chronically ill, and medical and para-medical personnel.

Boosters are essential because it produces extremely short-lived antibodies.

Rubella Vaccine

No vaccine for immunization against this disease is available; it is in the experimental stage at present. A vaccine is needed that not only produces an immunity but that will induce disease that is not transmissible to another susceptible individual. It will probably be five years before such a vaccine is available.

The status of gamma globulin in prevention of this disease is extremely doubtful. Some studies even show an increase in the attack rate after administration of gamma globulin.

Summary

Immunization schedules can follow no cut and dried pattern. Each individual physician must be the judge of what is best for his patients, but a suggested immunization schedule is presented for the physician's consideration. The danger of "over-immunization" as well as "under-immunization" is brought to the physician's attention. The lack of a substitute for a routine smallpox vaccination is discussed as well as the outlook for the development of a vaccine for the prevention of rubella.

Mechanism of the hypoglycemic effect of THAM, by Maria G. Buse, M. D. (Charleston). Ann Anesth Franc 7:597-604, July-Sept. 1966.

The effect of THAM on the glucose metabolism of rat diaphragms was studied in vitro of physiological pH. The addition of THAM to the incubation medium significantly stimulated the uptake of glucose, lactate production and oxidation of glucose to CO_2, but significantly decreased the glycogen content of the muscles.

THAM induced stimulation of glycolysis is independent of the bicarbonate or CO_2 concentration in the medium. THAM-chloride (0.05 M) stimulated glucose utilization significantly when added to the balanced salt solution or when substituted for equimolar concentrations of NaCl in the medium; however, the former effect was significantly greater.

The effect of insulin and THAM on glucose uptake and lactate production was additive, while it was opposite on glycogen synthesis. Insulin promotes glycogen synthesis, the penetration of sugars across the cell membrane and protein synthesis.

THAM exhibits none of these properties.

It is suggested that THAM stimulates glucose uptake and glycolysis of skeletal muscles directly, by a mechanism which is different from that of insulin, but that insulin has a permissive role.

This could explain the hypoglycemia observed following the infusion of large doses of THAM in humans and animals.

Immunization Schedule Recommended by the Executive Committee of the S. C. State Board of Health

Starting Age	Immunizing Agents
2 months	DPT, Type I OPV
3 months	DPT, Type III OPV
4 months	DPT, Type II OPV
6-11 months	Smallpox Vaccine(1)
12 months	Measles Vaccine
18 months	DPT, Trivalent OPV
3 years	DPT
5 years	DPT(2), Smallpox Vaccine Trivalent OPV

(1) Any person not previously vaccinated shall be vaccinated forthwith except as provided in Rules and Regulations.

(2) Only DT adult type should be given children 6 years of age and over. After age 5 (preschool age) diphtheria-tetanus toxoid booster and smallpox revaccination is recommended every ten (10) years. Foreign travel regulations require revaccination for smallpox every 3 years.

(3) Abbreviations:
DPT—Diphtheria and Tetanus Toxoids and Pertussis Vaccine combined.
OPV—Oral Poliomyelitis Vaccine.

Adapted from the Report of the Committee on the Control of Infectious Diseases of the American Academy of Pediatrics, 1966, the Recommendations of the U. S. Public Health Service Advisory Committee on Immunization Practices, and the S. C. Code of Laws.

Ideally, two live virus vaccines should NOT be given simultaneously.

This schedule is flexible and may be modified for certain individuals and circumstances.

Typhoid Vaccine and Influenza Vaccine

Typhoid Fever—In consideration of the current status of typhoid fever in S. C., typhoid immunization is NOT recommended as a routine procedure. Selected immunization is indicated in the following situations:

1 — Intimate contact such as household contact with a known typhoid carrier.

2 — Community or institutional outbreaks of typhoid fever.

3 — Foreign travel to areas where typhoid fever is endemic.

Dosage A — Primary Immunization
1 — Individuals 10 years of age and over — 2 doses of 0.5 cc each subcutaneously 4 or more weeks apart.

2 — Children 6 months — 10 years of age — 2 doses of 0.25 cc each 4 or more weeks apart.

NOTE: When it is desirable to secure rapid immunization three (3) doses of same size as above may be given at weekly intervals.
Dosage B — Booster doses may be given when desirable at intervals of 3 or even more years after prior immunization. The intradermal route of injection may be used for booster doses.

Influenza—Vaccine is not recommended for all individuals. It should, however, be given to groups known to experience high mortality from epidemic influenza such as:

1 — Persons of all ages who have chronic debilitating disease e.g. cardiovascular and pulmonary disease, diabetes, nephritis.

2 — Persons over 65 years of age particularly those in institutions.

3 — It may be given to groups necessary to the operation of hospitals and other institutions for the care of the sick, municipal and other essential government operation, utilities and essential industry.

Dosage A — Primary Immunization — For those persons who have not been vaccinated since July 1963 — 2 doses of 1.0 cc each of polyvalent vaccine subcutaneously 2 months apart.

Dosage B — For those vaccinated since July 1963 — One (1) dose of 1.0 cc subcutaneously. An intradermal dose of 0.1 cc is effective as a booster.

POISONOUS PLANTS IN SOUTH CAROLINA VI.

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The Melanthioideae subfamily of the lily family contains seven or more genera which elaborate colchicine and related alkaloids. None of these plants is native to South Carolina but the showy attractive flowers of the genera *Gloriosa* and *Colchicum* have led to the planting of various species and horticultural varieties of these genera as garden ornamentals in South Carolina. Toxic alkaloids are contained in all parts of these plants but the underground tubers have higher concentrations than the leaves and flowers.

The glory-lily or climbing-lily (*Gloriosa*) has red or yellow, lily-like flowers; it climbs by tendril-like extensions of the leaf tip. Animals may be poisoned by eating the foliage or flowers. If humans ingest parts of the plant in sufficient amount, particularly the tuber which has been mistaken for sweet potatoes, death can occur in four hours. *G. superba* L., *G. rotschildiana* O'Brien, *G. simplex* L. have colchicine and related alkaloids.

The autumn crocus or meadow saffron (*Colchicum autumnale* L.) is native to Europe and has been recognized as poisonous since the time of Dioscorides. Its establishment in therapy for gout dates from the last half of the 18th century; colchicine was isolated in 1820. The small corms of most *Colchicum* species develop flowers in late summer or autumn; the very short flower stalk and the lower part of the light purple or white, crocus-like flower remains underground; the narrow lanceolate leaves appear in the spring, reaching about eight inches in height, and die off in the summer; about June the capsular fruit emerges from underground.

Several species and varieties of *Colchicum* are cultivated in gardens. Any part of the plant may poison grazing animals. Goat and sheep milk is said to transmit the poisonous alkaloids which may cumulate to toxic levels, being excreted only slowly. Children are occasionally attracted by the flowers and by the rattling dry capsules and eat the seeds. A little more than half a gram of seeds (equivalent to 6.0 mg colchicine) could be fatal although larger doses were noted in most fatalities. The recorded symptoms of colchicine poisoning simulate those of cholera. There may be a burning sensation in the throat, a feeling of suffocation and difficulty in swallowing; gastrointestinal distress (burning in the fundus of the stomach, nausea, vomiting, bloody diarrhea) and myalgias and arthralgias develop.

In the subfamily Asphodeloideae of the lily family the genus *Hemerocallis* (day lily) has numerous species and varieties which are grown in South Carolina, e.g. *H. minor* Mill. the dwarf yellow day lily. At least one species, *H. fulva* L. known as the tawny or orange day lily, has become naturalized from the coast to the mountains. Although *Hemerocallis* species have been reported as poisonous, it seems that the danger is slight. Earlier reports of colchicine in the bulb were in error.

Hemerocallis fulva

The Lilioideae subfamily includes the genus *Fritillaria* which has numerous Asiatic species and some species native to our western states. A representative likely to be cultivated in rock gardens or as a pot plant in South Carolina is *F. meleagris* L. known as snake-head or checkered-lily. This plant, native to Europe, has stems up to 18 inches tall with a few alternate, narrow leaves, 4 to 6 inches long; the terminal flower, or sometimes 2 or 3 flowers, has a short, open bell form and is 2 to 3 inches in diameter; checkering from purplish or maroon veins is characteristic. The variety *alba* is wholly white. Snake-head contains ester type steroid alkaloids (imperialine, peimine and others) related to some of the *Veratrum* alkaloids and could be hazardous if eaten. Heart depressant action would likely be shown. Treatment would follow the pattern for *Veratrum* poisoning (see the preceding article of this series).

In the genus *Lilium* only the cultivated *L. tigrinum* Ker, the tiger lily, has been reported as causing disress in the form of vomiting and later on fever; the bulblets ("berries") in the leaf axils were eaten.

Several species of *Tulipa* and numerous horticultural varieties are often grown in our gardens. The bulbs of these ornamental plants can be poisonous if eaten. Eighty years ago the potential toxicity was reported although the alkaloid "tulipine" still awaits chemical clarification. The pharmacological effects noted: cardiac poison with veratrine-like action, paralysant of sensory but not motor nerves, action on the cord and medulla, and strong sialagogue activity.

Scilla, Urginea and *Ornithogalum* are closely related genera of the subfamily Scilloideae. The name squill is applied to species of the first two genera; star of Bethlehem is a common name for the third genus. Digitaloid activity is a characteristic shared by several species of these genera including those cultivated and naturalized in South Carolina. Representatives of *Scilla,* planted for early spring blooms, are *S. nonscripta* Hoffmgg. et Link and *S. hispanica* Mill. known as bluebells. Flower stalks arising from the bulbs reach 12 to 20 inches and are terminated by a nodding raceme of about a dozen somewhat bell-shaped flowers whose color varies in different forms of the plants from blue, rose-purple, rose to white. S. *amoena* L. or star-hyacinth only reaches 4 to 6 inches in height; it has 4 to 6 blue to whitish flowers.

Imports from Mediterranean countries of the dried bulbs of red and white varieties of *Urginea maritima* (L.) Baker furnish the material used in preparing rodenticides and drug products. Squill bulbs contain heart-active glycosides.

Ornithogalum umbellatum L., a native of Europe, cultivated in South Carolina gardens for its attractive white flowers, has become naturalized in the piedmont in woods and fields and along roadsides. The tufts of onion-like leaves have a light green midrib; the several star-like flowers on the 12-inch stalk are about an inch in diameter and green keeled with white margins outside but are white inside. Livestock are poisoned by grazing the plant, the bulb being the most toxic part. Cardiac glycosides like those of lily-of-the-valley were found in the bulb in the late 1950's; earlier reports on the presence of colchicine were shown to be erroneous. *O. thyrsoides* Jacq. of South Africa is also found in gardens. Some differences from *O. umbellata* are the lanceolate leaves which may be 2 inches wide; the flowers are more numerous, in a dense raceme, and are white to pale yellow, lacking the green keel on the outside. This plant also should be kept from children and stock.

Squill glycosides differ from most cardiac glycosides by having a six-membered lactone ring (as do the toad poisons) rather than a five-membered ring like the strophanthidin from convallatoxin and other glycosides. The first symptoms of poisoning from eating the toxic species mentioned above are nausea and gastrointestinal distress. Later the typical symptoms of digitalis poisoning will occur. Treatment is the same as for digitalis poisoning.

Three other genera of the Scilloideae subfamily are *Hyacinthus, Muscari* and *Pleea.* The well-known common garden hyacinth (*H. orientalis* L.) bulbs are emeto-cathartic as are those of the several *Muscari* species (*M. racemosum* (L.) Mill. the grape hyacinth; *M. botryoides* (L.) Mill. the globe hyacinth; *M. comosum* (L.) Mill. var. *plumosum* Hort. the plume hyacinth). The irritant substance in all these plants is probably a saponin. The grape hyacinth and globe hyacinth have escaped from gardens and have naturalized in the piedmont, growing in woods and meadows and along roadsides.

Pleea tenuifolia Michx., the rush-featherling, grows in open fields and pinelands of the coastal plain. Its rhizome sends up a few elongated, rush-like leaves; the terminal raceme has a few white flowers in the fall. It is not common and its poisonous nature needs confirmation.

Is routine ordering of both hemoglobin and hematocrit justifiable?—D. J. Addison (Ottawa Civic Hosp, Ottawa) Canad Med Assoc J 95:974-975 (Nov 5) 1966.

In order to assess the value of routine simultaneous hemoglobin and hematocrit determinations, paired determinations in the following groups were studied: (1) 360 consecutive pairs from the hematology laboratory, (2) 95 pairs on general medical cases, (3) 43 pairs from ten cases of upper gastrointestinal hemorrhage, and (4) 62 pairs in ten burn cases. These values were plotted on scatter diagrams. In the 560 pairs only three disparate determinations were found. In most clinical situations, determination of the hemoglobin or the hematocrit as a screening procedure provides as much useful information as is obtained by simultaneous determinations of both.

Treatment of acute allergic manifestations with epsilon aminocaproic acid—M. Sotty and C. Gillot. Presse Med 74:1943-1948 (Sept 17) 1966.

In less than an hour all symptoms of allergic reaction due to antibiotics subsided in five patients after epsilon aminocaproic acid was administered. The same happened in a case of allergy to coffee. Epsilon aminocaproic acid given in preventive doses to two patients with food intolerance and to another two with idiosyncrasy to iodides seemed to prevent allergic manifestations when subsequently offending materials were used. Epsilon aminocaproic acid seems to have beneficial effects both in skin reactions and in systemic reactions manifesting with circulatory collapse and respiratory symptoms. Fibrinolysis actually precedes clinical symptoms of allergy. Epsilon aminocaproic acid is useful in treating patients with allergy due to its inactivating antifibrinolytic properties.

X-RAY FILM OF THE MONTH.

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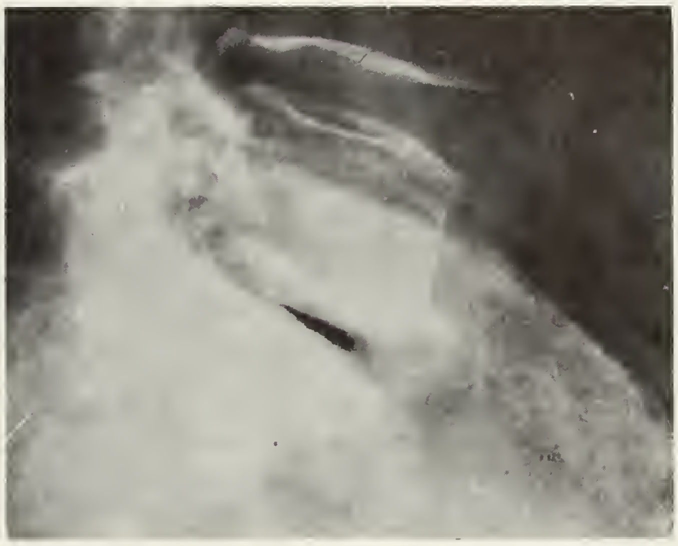

This lateral spot film of the lumbo-sacral junction was taken on a middle age white female complaining of low back pain.

Disc degeneration is a phenomenon of aging apparently due to normal wear and tear. Its onset may be accelerated in young individuals having instability of the vertebral column because of anatomical variants or congenital defects. With advancing age, there is a desiccation of the disc so that it becomes inelastic and eventually large fissures are produced within the disc substance. These can be recognized on the roentgenogram when the vertebral bodies are pulled apart, such as occurs when the spine is extended. As the fissure gapes, gas diffuses from the interstitial fluid space into the partial vacuum and a radiolucent line is produced within the disc substance, such as is shown here at the L-5/S-1 level. Several terms have been used to describe this, but intervertebral disc fissure is probably the most descriptive of the anatomical change present. As a consequence of the disc degeneration, excessive stress is placed on the longitudinal ligaments resulting in marginal osteophytes and sclerosis of opposing vertebral end plates.

It should be noted that with degeneration of a disc, the interspace becomes narrowed, yet as the L-5/S-1 interspace is normally somewhat narrower than the other interspaces, the simple narrowing of this interspace cannot be taken as a sign of disc degeneration. If, however, an intervertebral disc fissure is seen, one can be sure that one has disc degeneration. This sign can also be used in occasional cases to separate the narrowing of an interspace due to infection from that due to disc degeneration. The fissures have no more significance than any other evidence of intervertebral disc degeneration.

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President's Pages

A conference was called in Washington to discuss the Regional Program for heart disease, cancer, and stroke. It was "to gather information and material which can be used in the forthcoming report of the Surgeon General to the President and the Congress on Regional Medical Programs."

A great deal of discussion was directed toward continuing education. What is the best method? The doctor already is exposed to many journals, papers, digests that are deposited unread in an ever growing stack—waiting to be perused. He already has his county or area medical meeting and usually his hospital staff meeting to attend. In South Carolina he has his general practitioner or specialist meeting. He should attend his State, perhaps the Tri-state or Southern, or even AMA meeting. He usually has access to educational TV and, like a hundred thousand other physicians in the U. S., he may subscribe to Audio-digest. It is impossible for a busy practitioner to take the time for all or even most of these enjoyable refreshers. He has a call to make, a delivery, or an operation to perform. Outside of his profession he has his family to consider, his church, civic, club, political and recreational interest to pursue. In California, for years, the medical schools have conducted refresher courses in an area. This has been done to a degree in South Carolina in district meetings. This should be stepped up. It is still difficult to attend medical meetings when held in the doctor's home town. He has too many demands that he cannot escape. In some states, the practicing physician is brought to a medical center—not necessarily a medical school—and is given a week's refresher course in his main endeavor in medicine. A resident is engaged to carry on his practice if necessary. This is a triple benefit. The resident gains experience in dealing with patients on his own, the practitioner is brought up to date and the instructors in the medical center gain from the experience of the practitioner. One of the leaders in California expressed the expectation that some of the operational funds will be used to make such an arrangement so attractive to the practitioner that he will be glad to participate.

Financing, especially with the turn in the political climate, may become quite a factor. Congress specified that the question of financing with funds from sources other than federal must be considered. I could find no state that so far has advanced any funds. No state, so far as I could determine, has made any advances in this direction. I was told that the West Virginia program has been promised aid from their Heart and Cancer Societies as well as from their state government. I feel that our program is properly moving slowly and gingerly at first to determine whether federal funds will be withdrawn or cut back. We would make a mistake to undertake an ambitious program and have to drop it because federal funds were stopped.

On the last day of the meeting the conference was upset by the reiteration by Dr. Debakey that medical centers for these regions must be built. His only support that I could discover came from Dr. Farber. In our discussion group we endorsed a resolution unanimously voicing our disapproval of brick and mortar centers. Our hospitals and offices find it difficult now to staff all facilities and, more important, we can see no valid reason for additional buildings. We still think of this as a program not a chain of demonstration centers. This program will be expensive enough as it is without buildings, staffs and properties to maintain.

Another area that the Congress will discuss is, should this program include other categories of disease. Since the three leading causes are already under the tent and since we haven't done much toward those three "and related diseases" as the law reads, we resolved unanimously that no more categories be added.

The suggestions of the conference will be used to make a report to the Ad Hoc Committee. The Ad Hoc Committee, as we understand it, will then make a report to the Surgeon General. The Surgeon General will then make his recommendations and suggestions to the President who in turn will submit them to Congress. Our discussion group, mindful of the steam roller methods of previous White House Conferences, requested that each of us receive the report that goes to the Ad Hoc Committee and also the report of the Ad Hoc Committee to the Surgeon General if such is feasible. If the Surgeon General reports other than the intent of the conference we want to see just where the change in the report occurs. As soon as, or if, I get such a report it will be reported in the Journal.

In summary, this program is based on the premise that the average practitioner cannot, with his usual work load, keep up with the latest developments in medicine. The idealistic purpose of the program is what we all strive for, to bring to all our patients the best possible health care. This program is designed in each region to fulfill best such a purpose in that region. It will demand the ideas, efforts, and cooperation of all phases of health care to implement it. Knowing the physicians in South Carolina as I do, I know that they will do their share.

George Dean Johnson, M. D.

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50 YEARS AGO

The Journal of the South Carolina Medical Association

March 1917

Announcements of the Annual Meeting at the Cleveland Hotel in Spartanburg appeared. Rates for rooms with "connecting bath" were from $1.50 to $3.00 a day per person.

The death of Dr. John L. Dawson of Charleston was noted.

The full text of the Association's Bill to regulate Opticians and Optometrists was given. Dr. R. M. Pollitzer contributed an article on diphtheria.

Preparedness for war was urged. The activities of the U. S. Pellagra Hospital in Spartanburg were described.

The Spartan Medical Club operated a medical library.

Editorials

Comments on Blue Shield Enabling Legislation

A special meeting of the Corporation of Blue Shield on January 8, and reconvened on February 4, was called by the president for the purpose of endorsing a draft of proposed enabling legislation. The administration stated that according to the interpretation of the present insurance commissioner the enabling Act under which Blue Shield now operates does not cover some contracts now in force. Furthermore it would not permit the extended coverage necessary for Blue Shield to meet the present and anticipated demands for prepaid health care. The original concept of limiting Blue Shield to services by physicians, with payments only to physicians, is no longer workable. The public is demanding contracts for reasonably complete health care. In order for Blue Shield to be actuarily sound it must operate upon a broad basis and compete in the market place with commercial companies for accounts of national scope. Blue Shield has the advantages of providing service benefits and of being a non-profit organization.

The proposed legislation makes it possible for Blue Shield to offer a broad scope of services including such as, but not limited to, dentistry, nursing, hospital beds, drugs and appliances. It also provides for Blue Shield to act, on a cost plus basis, as agent for corporations and governmental bodies. This latter function is not to be under the supervision of the commissioner of insurance. The wording of the proposed legislation is all inclusive. The section concerning the board of directors makes it possible for Blue Shield to pass out of control of the South Carolina Medical Association.

There was strong opposition based upon the breadth and far reaching implications which were considered dangerously socialistic. It was commented that the undesirable features were included in so many interlocking sections as to make simple deletion or acceptable modification impractical. It was proposed that an appropriate committee be appointed to rewrite the draft which would be considered at a subsequent meeting. A preferable alternative would be for the Blue Shield Corporation to take no action with regard to the present draft of enabling legislation inasmuch as the South Carolina Legislature has already appointed a separate commission to study and report on the problem of enabling legislation for Blue Cross and Blue Shield. It was argued that should broad legislation of this type be necessary it had better come from the legislature as it would be inadvisable for the undesirable features to have the apparent endorsement of the physicians of the state.

The administration stated that whereas a broad enabling act was necessary from a legislative standpoint, in the final analysis the nature of every contract has to be approved by the Board of Directors. Furthermore, it is very important that action be taken at this session of the legislature.

There followed a long discussion generally repetitious and uninforming and often spirited and emotional, probably not influencing many votes. Fortunately for those who attended both meetings, at the first meeting most of the basic considerations were covered reasonably well. There was resort to parliamentary manoeuvering. Little progress was being made. Debate was cut off and the question brought to a vote. The proposed enabling legislation was endorsed by approximately a 5 to 3 majority.

Factors influencing the affirmative vote were that Blue Shield is serving a good purpose and should continue in operation, a feeling of confidence in the ability and judgment of the Board of Directors to control the various contracts, regardless of the permissiveness of the legislation, and a fear that delay in obtaining adequate enabling legislation might seriously impair the operation of the plan.

The vote for endorsement should not be construed as an unqualified approval of the draft as presented. Among those who voted in the affirmative there were some who held strong reservations concerning those features which determined the vote of the minority.

While the subject of Medicare was an item of business at the original meeting, it was ruled out of order at the convened meeting in as much as it is to be considered at the May meeting. However, in the general discussion at both meetings some of the proponents of the proposed enabling legislation expressed serious doubts as to the advisability of Blue Shield continuing to serve as agent for Medicare.

William H. Prioleau, M. D.

Those Unidentified Serum Specimens

Can you imagine anyone sending a specimen of blood or spinal fluid to the State Board of Health Laboratory for Serologic Test for syphilis without identifying it with the name and address of the sender, and sometimes even without the name of the patient as well?

Strange but true, there have been many such instances in the past, and three such instances occurred only last week. Two of these were blood specimens and were found by VDRL to have high titres – 1/16 and 1/64 respectively. In one case the names of the doctor (in the military service and, therefore, not listed with us) and patient were both given but no return address. In the other, the patient's name and street address were given but no town named. A check with the Venereal Disease Central Registry (which carries nearly 200,000 names) was fruitless, as was a check with the Laboratory records. Purely by accident, and involving considerable delay, the addresses of both cases were finally located.

The spinal fluid specimen was reactive but at the present writings no report on this test has been forwarded to the physician (or hospital) who sent the specimen because neither the name nor the address of the sender nor the address of the patient was given on the accompanying laboratory report form.

The failures in giving the name and address of both physician and patient (as described above) are tragic, for many reasons:

1. The laboratory, which is extremely desirous of rendering prompt and efficient service, is then criticized unfairly for the delay in rendering the report, when actually it was the fault of the sender, as described above.

2. The Venereal Disease Control Division is concerned about this problem, especially when the titres are high, because such titres call for immediate epidemiologic procedures. If these laboratory reports to the Venereal Disease Control Division are delayed, it means that the high titred patient may infect many others and start new chains of infection before he can be treated and interviewed for sex contacts. If patient's and sender's name and address are not sent to the laboratory along with the specimen, then unnecessary delay is inevitable.

3. The infected patient, regardless of his sex habits or stage of the disease, has every right to diagnosis and treatment at the earliest possible moment, both for his own good and for the sake of his contacts and others in the community. Once again, then, the deplorable delay discussed above is not the fault of the Laboratory; it is not the fault of the Venereal Disease Control Division; it is not the fault of the patient – it is the fault of the sender. It is hoped that this situation may be corrected without delay.

R. W. Ball, M. D.

Gill Memorial Eye, Ear and Throat Hospital, Roanoke, Va., will sponsor its Fortieth Annual Spring Congress in Ophthalmology and Otolaryngology April 3-April 7.

Address inquiries to: Superintendent, P. O. Box 1789, Roanoke, Va.

The 1967 Scientific Session of the American Cancer Society will be held at the Sheraton-Dallas Hotel in Dallas on May 3. The Symposium is entitled "Current Concepts in Etiology and Diagnosis of Cancer".

Cos and Crimea Revisited
Nursing Schools and Patients Needs

Between 1959 and January 1966, hospitals closed 91 diploma schools of nursing, and indications are that 59 additional schools have now been or shortly will be closed.

During this approximate same period of time, 67 new associate degree schools and 25 new baccalaureate degree schools have been established, and the number of nurses graduating has increased by an average of 824 each year during this same period. The number which it is believed is needed yearly, however, is some 3,000 additional graduates.

The tuition costs for nurses have risen from very nominal costs of less than $300 per year as charged by the average hospital school of nursing, to charges that are equal to those of colleges in their locale or other colleges in university-situated schools, namely in the $1,200 to $2,500 per year range.

The largest number of the new schools have been established in a few areas, chiefly in New York, Texas, and California. It is unlikely that the graduates of these schools will supply the full needs in these states, much less those of other-areas.

These are all facts as reported by Dr. Thomas Hale in *The New England Journal of Medicine* of November 10, 1966.

It is not likely that the new schools can produce enough nurses to meet the current needs, and the current pressures on the diploma schools by accreditation bodies and boards have succeeded in closing down the diploma schools more rapidly than new and expanded programs can hope to meet.

The one-year practical nurse schools now appear to be undergoing pressures that will close these also.

Most hospitals are meeting the needs of their patients by various sorts of nurse aides or "nursing technicians", or helpers—individuals trained in only a small segment of the technique of bedside or patient care. There will be an increase in the use of such partially trained helpers if hospitals are to insure that the patients within their walls have some sort of needed help, that is to be given in addition to that relatives at hand can provide as sitters and comforters.

It seems very questionable that the RN from the diploma school has been adequately replaced by either the baccalaureate or associate degree nurse, each of whom, although potentially capable of practicing expert nursing, and because of the breadth and increased depth of educational experience, can assume increased technical responsibility, yet neither in any sense at the time of graduation is as experienced in bedside or ward nursing as her RN colleague of the hospital school. The new nursing school programs teach the theories and very little of the practice of nursing at the bedside level, and make it quite clear than in their curriculum design that it is not their intention to do so or that they believe that such exposure as an educational process has any more merit than the laboratory experiences have in other collegiate undergraduate science courses. A program of internship type experience, it is believed, would quickly make up such deficits if required for a 9 to 12-month period, as is required of physicians after their formal or classroom training. Such experience would also focus the graduate's ideas on special areas in which her talents might lead her to practice her profession to her best capability, just as it does for the neophyte physician.

Although there are many cogent arguments for the establishment of nursing as a professional discipline based primarily on a collegiate educational experience, the profession of the nurse exists primarily, as do other branches of the health professions, because of community needs for care of the sick. Preventive medicine, technical advances, industrial needs, and educational needs all call upon the medical or health professionals for certain special helps, but even as specialized professionals these all relate to the primary need of the individual for help in either the acute crises of illness or injury, or in some established area for prevention. The logical way for training in the application of one's profession in the health field is by having intimate and direct care and responsibility for service to a patient, and this service experience can be most efficiently rendered and its application supervised if the programs are hospital oriented.

Improvement and upgrading of nursing schools have taken place rapidly, and the nurses who have worked so conscientiously and competently to achieve these goals are to be commended and congratulated by all. Their achievements can only be admired, and their industry and competence praised. As in all human endeavors, we all often overswing or overemphasize certain of our efforts, and often blind ourselves to the consequences of corrections which may become overcorrections. Many feel that as educational broadening has taken place, service ideals have been downgraded. As nursing has moved more into the stream of general education, the idealism of service has been deprecated as the ideas of career professionalism of an independent and educated type have been advanced.

In all areas of the health professionals there has been a somewhat similar trend, and such criticisms cannot be pointed at the nursing educationists alone.

It is now time for all of us to remember that a profession is such rather than a trade by virtue of public avowal that by training, dedication, and as based upon the judgment of our peers, we declare we have a unique competency to perform certain services for our fellows; and that they, in turn, agree to protect us from gross impersonation by those not so qualified and dedicated, so that we have, by community-given privilege, a sphere of influence and a recognized place where trespassers intrude at their peril. In addition to professing, however, all of us must deliver to society those services we have been dedicated and delegated to give in accordance with our public profession.

It will be of no help, nor will it solve problems, to recall "the good old days". It is now that we must all, in all branches of the medical or health professions, re-dedicate our efforts towards fulfilling our only reason for being, and recall our primary goals, which are to prevent and alleviate human suffering by those means our skills allow. We are educated in the arts, sciences, humanities, and ways of life, but our profession is to give humanitarian service, not just applied human biology. The Hippocratic Oath and the Nightingale Pledge provide the basic tenets of the health professions, and accreditation boards and codes of ethics are only commentary.

Vince Moseley, M. D.

Emergency Room Solutions

Various solutions to the problem of staffing hospital emergency rooms have been developed over the state. Columbia plans to consolidate county and city emergency rooms in the interest of efficiency, and to staff a single room with full time physicians paid by the County Board of Administrators. Greenville General Hospital showed a drop in patient load in 1965-66, in which time 97 visits a day were the average, as contrasted with 116 visits a day in the preceding period. This desirable decrease is attributed to a campaign of public education as to the real purpose of an emergency room.

In Anderson, 30 doctors rotate in serving 12 hour shifts from 7 p.m. to 7 a.m. For this service the doctor on duty receives $100, and fees collected go into a hospital professional fund.

Varying local conditions influence the type of arrangement that is functional in any emergency room. Perhaps some day a uniform and economical system may be developed.

Measles Decrease

The state looks with pride on a year elapsed without a case of poliomyelitis. It also looks to eventual elimination of measles and feels justified in claiming credit for a considerable reduction in the disease last year. While this is attributed to the use of measles vaccine, in view of the well known periodicity of the disease, some reservation must be made in giving all credit to the promotion of vaccination.

Now in the press and shortly to be
published by the
South Carolina Medical Association
Volume 2
of
A History of Medicine
in South Carolina
By Joseph I. Waring, M. D.
covering the period 1825 to 1900.

This book is a continuation of the first volume, published in 1964, whose story ended at 1825. The preceding volume was well received by medical historians.

The second volume will soon be available.

For a limited period members of the South Carolina Medical Association are entitled to purchase this book at $3.25 postpaid. Orders may be placed now.

It's price on the market will be $7.75 postpaid.

Advance Order Form
South Carolina Medical Association
Historical Committee
80 Barre Street
Charleston, S. C. 29401
Gentlemen:

Please send me .... copies of the book "A History of Medicine in South Carolina, 1825-1900", by Joseph I. Waring, M. D. at $3.25 per copy.

Payment enclosed.

Name

Address

City and State, Zip

Please make check payable to:
S. C. Medical Association,
Historical Committee

DOCTORS IN THE NEWS

Dr. George C. Durst was recently reelected chairman of the Sullivan's Island Township Commission. He has served on the commission since 1950. **Dr. Edward E. Kimbrough, III** of Columbia is in South Vietnam. He is participating in the Volunteer Physicians for Vietnam Program, sponsored by the U. S. Agency for International Development and the American Medical Association. **Dr. Cecil D. Warren**, a native of Mayesville, has gained a measure of fame by becoming the first known physician to capture and subdue a violent human being with a tranquilizing gun. While serving as medical director of Clarke County, Ga., Dr. Warren used a veterinarian's tranquilizing gun to subdue a prisoner in the county jail who had gone "berserk" and was tearing up his cell. **Dr. Josiah S. Matthews, III** of Darlington has been elected to the American Academy of General Practice. **Dr. Robert P. Bland, Jr.** has joined **Drs. Shepard Dunn, Edward Hopkins** and **Lynn Derrick** in the practice of ophthalmology in Columbia. Dr. Bland is a native of Sumter. **Dr. James G. Halford** has been elected chief of staff of the Anderson Memorial Hospital. Also elected were **Dr. Charles H. Browne**, vice-chief; **Dr. G. C. Rippy**, secretary; and **Dr. Walter Gaillard**, treasurer. **Dr. Edward J. Dennis** of Charleston has been elected secretary of the Section on Obstetrics of the Southern Medical Association. **Dr. Richard Y. Wescoat** of Lancaster has been named a member of the State Board of Education. **Dr. Robert H. Crow** of Cowpens is Spartanburg County Society's Doctor of the Year. This recognition was given to the general practitioner at a meeting of the society on January 24.

Dr. 'Count Pulaski, Jr. of Hampton was awarded the Distinguished Service Award for his work with mental illness and premarital conference for young couples about to be married. The award was given at the Jaycee Bosses' Night Banquet on January 21. Spartanburg County Medical Society's newly elected officers include **Dr. Sam E. Elmore**, president; **Dr. William C. Herbert**, president-elect; **Dr. L. Ronald Hurst**, secretary; **Dr. J.**

New from Du Pont

Symmetrel®

(Amantadine HCl)

The first oral chemical virostat for the prevention of influenza A_2

Influenza virus

Protein shell enclosing the core of nucleic acid (RNA)—artist's representation

The incidence of influenza A_2. In this country, where influenza is one of the leading causes of morbidity, influenza A_2 (Asian) continues to be a serious medical problem. In 1957 influenza A_2 was responsible for approximately 40,000 excess deaths in a three-month period. Since that year the most prevalent influenza virus has been A_2 (Asian).

What is Symmetrel®? "Symmetrel" (amantadine HCl) is a new synthetic chemical which acts as a molecular barrier to virus penetration. It provides for the first time specific oral medication for the prevention of respiratory infections caused by influenza A_2 (Asian) viruses—an entirely new approach in preventive medicine.

For prescribing information, see last page of this presentation

What Symmetrel® (amantadine HCl) means to you

...the first and only oral chemical agent to prevent influenza A_2 (Asian).

...not a vaccine or antibiotic, but a new synthetic chemical unrelated to any other chemotherapeutic agent.

...unique mode of action: prevents virus penetration of the host cell without affecting vital cell functions.

...specifically active against all influenza A_2 viruses tested to date.

...not indicated for the prevention of influenzal or respiratory illness other than influenza A_2 or for the treatment of established disease.

...does not interfere with normal antibody response; acts in concert with pre-existing antibody.

What Symmetrel® means to your patient

...possible immediate influenza A_2 protection when taken following suspected contact.

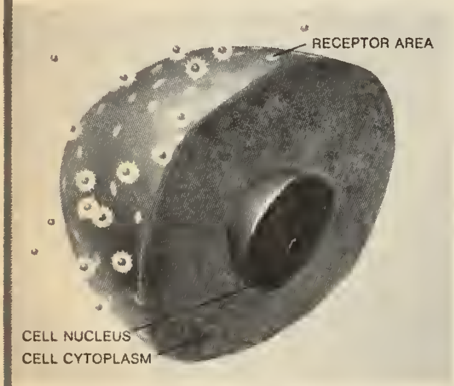
...may be particularly useful during outbreaks or epidemics and for high-risk patients in whom the occurrence of influenza A_2 is especially hazardous.

...a high degree of safety in clinical use.

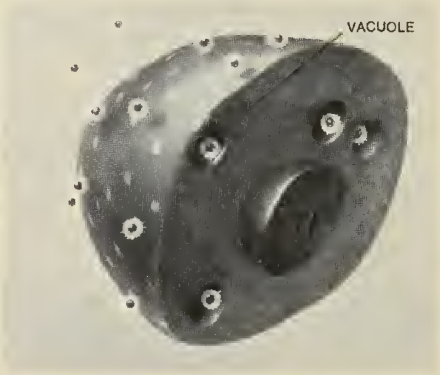
...simple once daily or b.i.d. dosage.

The mode of action of Symmetrel®

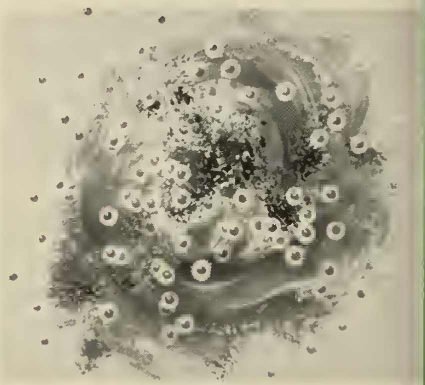
How the influenza virus invades and destroys the untreated cell



1 Viruses outside the cell attach themselves to specific cell receptor areas

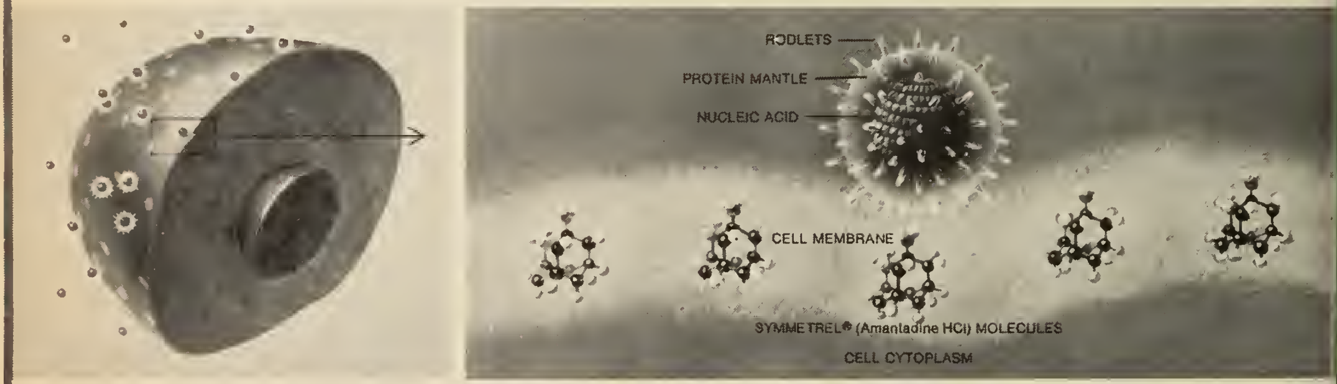


2 The virus is incorporated into a vacuole within the cell. From this vacuole the virus nucleic acid passes into the cell cytoplasm



3 The virus nucleic acid then directs the cell to produce both new virus nucleic acid and virus protein coat material which aggregate to form new virus particles. This process leads to the release of new virus particles and eventual destruction of the cell

How Symmetrel® (Amantadine HCl) prevents virus invasion[1]



Our current knowledge leads us to believe "Symmetrel" acts as a molecular barrier to influenza virus penetration. Shown here in a greatly enlarged section, "Symmetrel"—located at the cellular membrane—effectively prevents (blocks) virus penetration. Thus, "Symmetrel" does not directly destroy the virus particle but acting as a virostat prevents the cycle of virus penetration, virus replication, and cell destruction that is characteristic of virus invasion of animal cells (tissue). *Artist's conception based on current scientific knowledge.*

[1] "Mode of Action of the Antiviral Activity of Amantadine in Tissue Culture", Hoffmann, C. E.; Neumayer, E. M.; Haff, R. F.; and Goldsby, R. A., Journal of Bacteriology *90*,623 (1965).

Safety of Symmetrel® Confirmed. When used as indicated, is generally well tolerated. No kidney, liver, bone marrow, or hematological disturbances have been observed.

Prescribing Information

Indications: "Symmetrel" is indicated for the prevention (prophylaxis) of influenza A_2 in persons of all age groups. Early use is recommended, preferably before or as soon as possible after actual or suspected contact with individuals suffering from influenza A_2. "Symmetrel" should especially be considered for high influenza-risk patient groups such as those suffering from chronic debilitating diseases and elderly persons.

Contraindications: Not indicated for the prevention of influenzal or respiratory illness other than influenza A_2 or for the treatment of established disease.

Warnings: Administration to patients with central nervous system disease, particularly geriatric patients with cerebral arteriosclerosis, and patients with a history of epilepsy or other "seizures," requires strict observation for possible untoward effects (see Adverse Reactions). Patients taking psychopharmacologic drugs, central nervous system stimulants, or alcoholic beverages should be observed for possible evidence of intolerance. Those patients who experience central nervous system effects or blurring of vision should be cautioned against driving or working in situations where alertness is important.

No teratogenic effects have been seen in reproductive studies in rats and rabbits. Studies in pregnant women have, however, not been done and use of this drug in women of childbearing age should be undertaken only after weighing the possible risks to the fetus against benefit to the pregnant patient. It should not be administered to nursing mothers since it is not known whether the drug is secreted in the milk.

Precautions: Ineffective against bacterial infections. Patients should be observed for idiosyncratic reactions as with all new drugs. Geriatric patients with pre-existing serious medical illnesses with mental or physical deterioration should be followed carefully medically while taking "Symmetrel." (See Adverse Reactions.)

Adverse Reactions: With higher than indicated doses manifestations of central nervous system effects such as nervousness, insomnia, dizziness, lightheadedness, drunken feeling, slurred speech, ataxia, inability to concentrate and some psychic reactions including depression and feelings of detachment were seen. Occasional blurred vision was reported at higher doses. Some of the milder and less pronounced symptoms above have been reported in a small number of patients taking the recommended dosage of 200 mg per day. Those were mostly transient and disappeared with continued administration of the drug. Some geriatric patients developed paranoid or hallucinatory behavior and became unmanageable while taking 200 mg daily. Medically unselected seriously deteriorated geriatric patients showed poor clinical tolerance after several weeks of daily dosing with 200 mg per day. One elderly patient with a history of prior cerebrovascular accident developed visual hallucinations and grand-mal convulsions while on drug at 800 mg per day. Some cases of dry mouth, gastrointestinal upset and skin rash and rarely, tremors, anorexia, pollakiuria, and nocturia have been also reported.

Safety: When used as indicated, is generally well tolerated. No kidney, liver, bone marrow, or hematological disturbances have been observed.

Dosage: *Adults:* Two 100 mg capsules (or 4 teaspoonfuls of syrup) as a single daily dose or the daily dose may be divided into one capsule of 100 mg (or 2 teaspoonfuls of syrup) twice a day.

Children: 1 yr.—9 yrs. of age: Calculate total daily dose on the basis of 2 mg to 4 mg per pound of body weight per day (but not to exceed 150 mg per day). Daily dose, given as the syrup, should be given in 2 or 3 equal portions.

9 yrs.—12 yrs. of age: Total daily dose 200 mg given as one capsule of 100 mg (or 2 teaspoonfuls of syrup) twice a day.

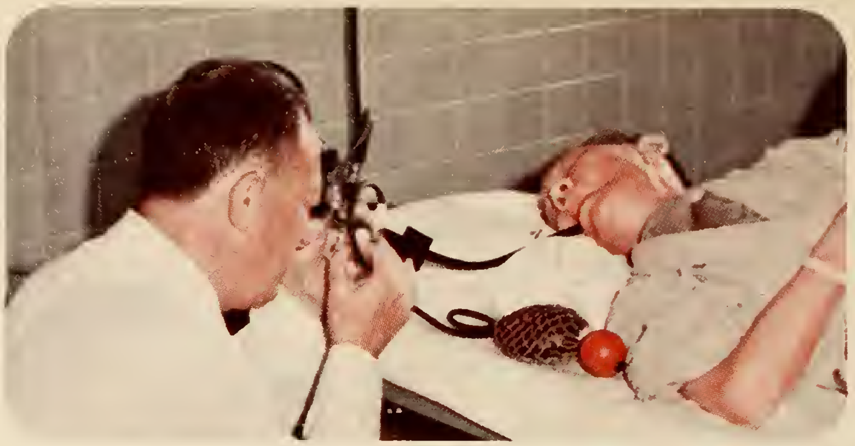
How Supplied: *Capsules:* Bottles of 100. Each red, gelatin capsule contains 100 mg amantadine HCl.
Syrup: Bottles of 1 pint. Each 5 ml (1 teaspoonful) contains 50 mg amantadine HCl.

DU PONT
REG. U.S. PAT. OFF.

Symmetrel®

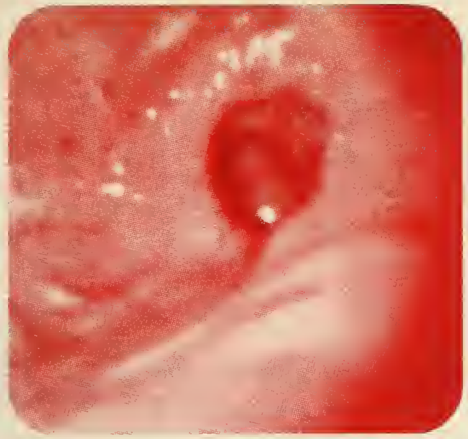
(Amantadine HCl)

A molecular barrier to virus penetration



NEW EVIDENCE:

Pro-Banthīne® (propantheline bromide) **gives positive, selective benefits in gastrointestinal disorders.**



Intragastric photograph of pyloric region showing complete relaxation of pyloric sphincter with 6 mg of Pro-Banthīne intravenously.

AN IMPORTANT PROBLEM in managing gastrointestinal disorders has been the choice of an anticholinergic agent which will act positively and selectively on the gastrointestinal tract without extensive secondary effects.

Recent direct observations with the cinefibergastroscope and intragastric photography[1] visually confirm previous evidence that Pro-Banthīne does, indeed, possess such selective activity.

Barowsky and his associates demonstrated that a minimal dose of 6 to 8 mg. of Pro-Banthīne intravenously produced complete relaxation of gastric activity. Secondary effects were not significant.

By contrast, it required 0.8 mg. or double the usual dose of atropine intravenously to achieve similar gastric relaxation. Side effects of this dosage of the belladonna alkaloid were pronounced. Ventricular rates were as high as 150 per minute.

For positive, selective anticholinergic benefits Pro-Banthīne is indicated in patients with peptic ulcer, gastritis, irritable colon and other forms of gastrointestinal hypermotility.

Dosage: The maximal tolerated dosage is usually the most effective. For most *adult* patients this will be four to six 15-mg. tablets daily in divided doses. In severe conditions as many as two tablets four to six times daily may be required. Pro-Banthīne (brand of propantheline bromide) is supplied as tablets of 15 mg., as prolonged-acting tablets of 30 mg. and, for parenteral use, as serum-type ampuls of 30 mg. The parenteral dose should be adjusted to the patient's requirement and may be up to 30 mg. or more every six hours, intramuscularly or intravenously.

Contraindications: In glaucoma or severe cardiac disease.

Precautions: Since varying degrees of urinary hesitancy may occur in the elderly male with prostatic hypertrophy, this should be watched for in such patients until they have gained some experience with the drug.

Although never reported, theoretically a curare-like action may occur with possible loss of voluntary muscle control. Such patients should receive prompt and continuing artificial respiration until the drug effect has been exhausted.

Side Effects The more common side effects, in order of incidence, are xerostomia, mydriasis, hesitancy of urination and gastric fullness.

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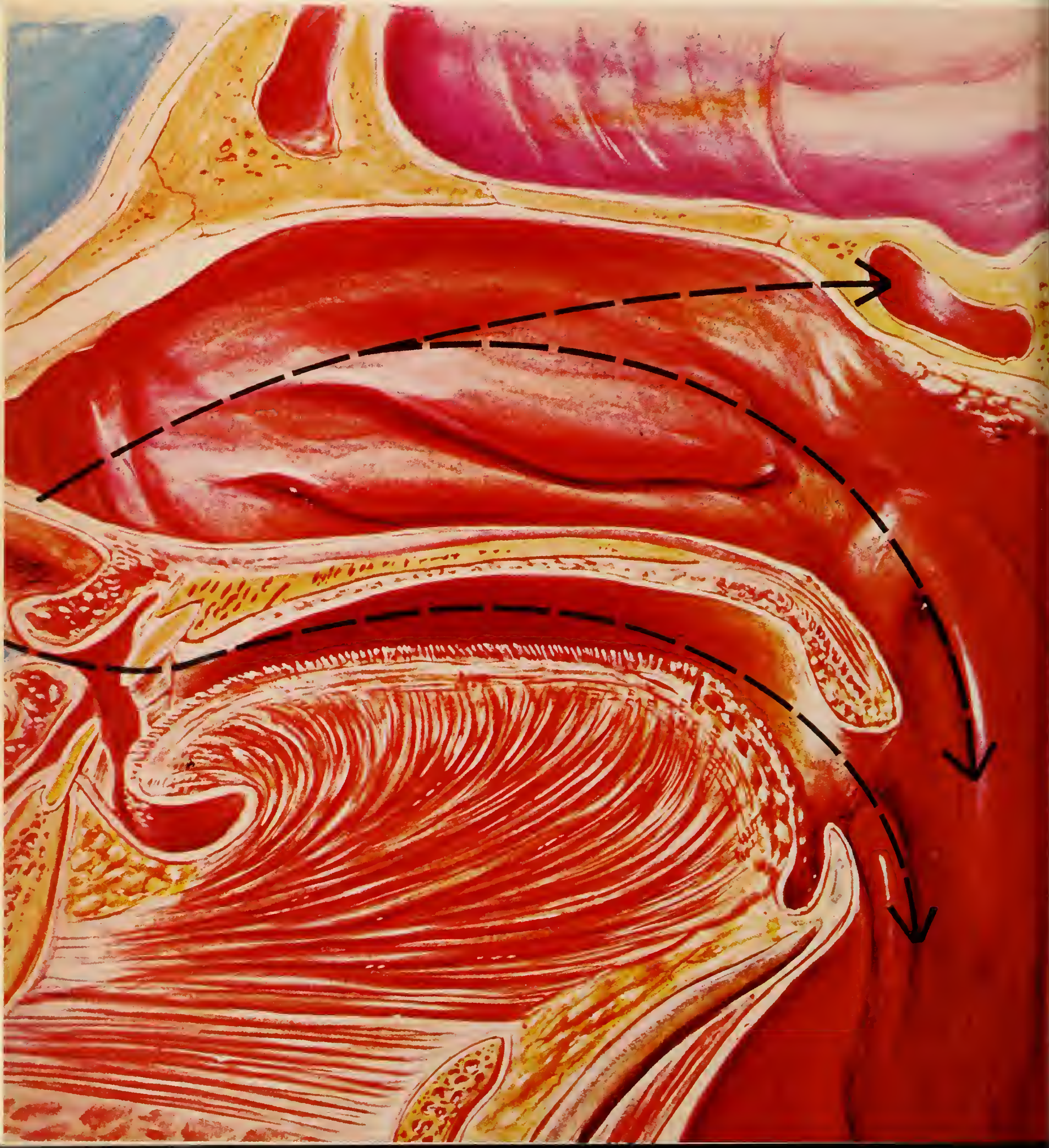
[1] Barowsky, H.; Greene, L.; Bennett, R., and Buganza, G.: The Effect of Anticholinergic Drugs on Gastric Motility and Pyloric Function, Scientific Exhibit, Annual Convention of the American Medical Association, Chicago, Illinois, June 26-30, 1966.

SEARLE *Research in the Service of Medicine*

When the battle with bacteria is in the upper respiratory tract

Routes of invasion through the oral and nasal passages to the nasopharyngeal mucosa: artist's depiction of sagittal section of head in perspective.



consider Gantanol (sulfamethoxazole)

To rapidly help the patient win against upper respiratory infections

When the respiratory tract has been invaded, an antibacterial that can assure effective yet generally uncomplicated therapy is your first line of defense...an agent such as Gantanol (sulfamethoxazole), the wide-spectrum antibacterial from Roche.

Gantanol (sulfamethoxazole) is effective against common susceptible upper respiratory pathogens, both gram-positive and gram-negative. Acting at foci of bacterial invasion, Gantanol (sulfamethoxazole) promptly helps control most infections, yet usually presents few problems to patients. Dosage is convenient and provides a measure of economy.

Before prescribing, please consult complete product information, a summary of which follows:

Contraindicated in sulfonamide-sensitive patients, pregnant females at term, premature infants, or newborn infants during first three months of life.

Warnings: Use only after critical appraisal in patients with liver damage, renal damage, urinary obstruction or blood dyscrasias. If toxic or hypersensitivity reactions or blood dyscrasias occur, discontinue therapy. In intermittent or prolonged therapy, blood counts and liver and kidney function tests should be performed.

Precautions: Observe usual sulfonamide therapy precautions, including maintenance of an adequate fluid intake. Use with caution in patients with histories of allergies and/or asthma. Patients with impaired renal function should be followed closely since renal impairment may cause excessive drug accumulation. Occasional failures may occur due to resistant microorganisms. Not effective in virus or rickettsial infections.

Adverse reactions: Headache, nausea, vomiting, urticaria, diarrhea, hepatitis, pancreatitis, blood dyscrasias, neuropathy, drug fever, skin rash, Stevens-Johnson syndrome, injection of the conjunctiva and sclera, petechiae, purpura, hematuria or crystalluria may occur, in which case the dosage should be decreased or the drug withdrawn.

Dosage: Adults—4 tablets initially, then 2 tablets b.i.d. or t.i.d. depending upon severity of infection. Children—1 tablet/20 lbs initially, followed by ½ tablet/20 lbs b.i.d.

How supplied: Tablets, 0.5 Gm, bottles of 50.

Roche Laboratories, Division of Hoffmann-La Roche Inc., Nutley, N. J. 07110

When there are bacterial invaders in the upper respiratory tract

Gantanol®
(sulfamethoxazole)

ROCHE

"Yes, Doctor, the pain is gone."

■ Despite introduction of synthetic substitutes, efficacy of 'Empirin' Compound with Codeine remains unchallenged.

'Empirin'® Compound with Codeine Phosphate gr. ½ No. 3
Each tablet contains: Codeine Phosphate gr. ½ (Warning – May be habit forming), Phenacetin gr. 2½, Aspirin gr. 3½, Caffeine gr. ½..

Keeps the Promise of Pain Relief

BURROUGHS WELLCOME & CO. (U.S.A.) INC., Tuckahoe, N. Y.

Sidney Fulmer, treasurer, and **Dr. Rupert E. Hodges**, vice president. **Dr. Joseph F. Borg** is joining the Tryon Medical Associates as consultant in cardiology. **Dr. DuBose Dent** of Columbia was recently elected president of the South Carolina Society of Pathologists. **Dr. Donald G. Kilgore, Jr.** of Greenville is vice president and **Dr. James R. Cain** of Columbia is secretary-treasurer. **Dr. D. J. Greiner** of Florence is councillor for South Carolina for the American Society of Clinical Pathologists, and Dr. Dent is the assemblyman for South Carolina to the College of American Pathologists. **Dr. James C. Brice, Jr.**, a 31-year-old general practitioner, was awarded the Easley Jaycees' Distinguished Service Award at the organization's annual banquet in January.

Woman's Auxiliary to the South Carolina Medical Association

Many exciting events await all women on May 8, 9, 10, 1967—that is all women who are fortunate enough to be members of the Woman's Auxiliary to the South Carolina Medical Association, and who find it possible to attend the annual convention of this organization to be held at the Ocean Forest Hotel in Myrtle Beach, South Carolina on the above mentioned dates.

For at this very significant and gala event our most honored President of the Woman's Auxiliary to the South Carolina Medical Association, Mrs. Leon Banov, Jr., of Charleston, S. C., will appear on the program along with two very special guests—Mrs. C. T. Wilkinson, of Wake Forest, N. C., President of the Woman's Auxiliary to the Southern Medical Association and Mrs. Asher Yaguda of Newark, New Jersey, President of the Woman's Auxiliary to the American Medical Association.

The Board Luncheon to held on May 9, this year for the first time, open to *all Auxiliary members*, will feature as guest speakers, two doctors who have served in Vietnam. Their talks should be inspiring to all.

Also on May 9, as a very special treat to the women, Kahn's Boutique, Myrtle Beach's most fashionable dress shop, will present a fashion show, offering those attending, a peek at high fashion personified!

The regular luncheon to be held May 10, will feature as its main speaker Mrs. Asher Yaguda, President of the Woman's Auxiliary to the American Medical Association. Please reserve these dates for a most memorable experience.

Dr. R. Randolph Bradham has returned to Charleston, S. C.

He left Charleston in 1964 for the purpose of pursuing studies in thoracic and cardiovascular Surgery at Duke University and more recently at the Veteran's Hospital, Oteen, N. C. He had been on the full time faculty of the Medical College with the title of Associate Professor of Surgery. He served as acting chairman of the Department of Surgery for two years between the death of Dr. Frederick Kredel in 1960, and the appointment of Dr. George Clowes in 1962.

Dr. Bradham will be in the private practice of surgery, and his work will be limited to thoracic and cardiovascular surgery. He will be connected with the Medical College in the position of Clinical Associate Professor of Thoracic and Cardiovascular Surgery. His office is in the Ashley House.

Associate Medical Director, Full-Time, Interested in Preventive Medicine for Large Corporation in Winston-Salem, North Carolina. Generalist, Internal Medicine or Occupational Health Background Preferred. Desirable Age 30 to 45. Salary Commensurate With Experience. Reply Box 1, South Carolina Medical Association, 113 North Coit Street, Florence, S. C. 29501.

Child Psychiatry Seminars for Pediatricians

Florence, S .C.

March 24—
1. "Attention Getting" Mechanisms
2. Autism

Lecturer: Dr. Rex Speers
University of Pittsburgh
Director of Child Analytical Training
Formerly Director of Child Psychiatry
University of North Carolina Medical School

April 14—
1. Dealing with the Parents and the Child with an Acquired Handicap
2. Problems Related to Chronic Disease Such as Diabetes

Lecturer: Dr. Norb Enzer
Assistant Professor of Psychiatry
Associate in Pediatrics
Duke University Medical Center

April 28—
Comprehensive Pediatrics
Lecturer: Dr. John D. Bridgers, Pediatrician
Infant and Child Clinic
High Point, North Carolina

Begun in January, these seminars will continue in March and April.

PATHOLOGISTS MEETING

For the first time, a regional meeting of the College of American Pathologists will be held in South Carolina.

The meeting is scheduled for March 31 and April 1 at the Medical College of South Carolina, Charleston, and will be attended by pathologists from throughout the Southeast.

Speakers include Dr. Leopold G. Koss of the Memorial Hospital for Cancer and Allied Diseases, New York. He will conduct a seminar on Abnormal Cytology. Dr. Alexis E. Lubchenco, a native of South Carolina, but who now lives in Denver, will represent the College of American Pathologists as a member of the Board of Governors of the College. Dr. Oliver J. Neibel, Jr., executive director of the College, will attend the meeting.

William S. Hall Psychiatric Institute

The male adult psychiatric inpatient unit has now been activated and is receiving patients. The inpatient service can therefore accommodate selected adult psychiatric patients of either sex.

The decision has also been made to rescind the initial inpatient service fee of $25 per day for the present time. The new fee has been set at $3 per day. It is felt that this will greatly facilitate the use of the Institute's clinical services during its early stages of operation. Referrals may still be made directly to the Institute by calling the central switchboard of the Department of Mental Health (phone AL6-9911, Columbia, South Carolina) and asking for the William S. Hall Psychiatric Institute Admitting Officer to arrange for an appointment for the patient to be seen. Patients may also continue to enter the Institute through the various procedures formerly listed including the informal admission which corresponds to the process of entering a general hospital.

Outpatient clinics of the Institute may be contacted for patient appointments by calling AL6-9911, Extension 514. These clinics will continue to utilize a sliding scale to arrive at a fee schedule for the individual patient.

1962 S. C. grad presently 2nd year med. resident desires 2 wk. locum tenens during vacation. Occasional weekend coverage may also be possible. Reply Journal.

MEDICAL COLLEGE OF SOUTH CAROLINA

Dr. Lawrence L. Hester, professor and chairman of the Department of Obstetrics and Gynecology, has been appointed to the Test Committee on Obstetrics and Gynecology of the National Board of Medical Examiners.

Dr. Bartley E. Antine, associate in ophthalmology, has been certified as a diplomate of the American Board of Ophthalmology.

Nine Clemson University faculty members met with Medical College faculty in Charleston on January 13 to implement their joint program in biomedical engineering. The series of informal dscussions and visits to Medical College laboratories was the first step in the program announced in December by the two institutions. The program will add a new dimension to the biomedical engineering training program at Clemson as well as provide engineering and technical information for Medical College research problems.

It is anticipated that other joint projects will develop between the Medical College and Clemson in the near future, especially in the areas of electrical engineering, environmental systems and ceramic engineering.

Faculty members of the Medical College of South Carolina received information in mid-January of the Alumni Professorial Chair Endowment Fund. A good response has been received, and it is anticipated that an increasing number of faculty members, both full time and clinical, will participate in the fund which will strengthen the teaching program of the College. More than 130 alumni and staff have now pledged contributions to the fund.

A surgical textbook entitled "Complications in Surgery and their Management," edited by Dr. Curtis P. Artz has just been published in its second edition. Co-editor of the book is Dr. James D. Hardy, professor and chairman of the Department of Surgery at the University of Mississippi School of Medicine. Dr. Artz was a member of Dr. Hardy's department from 1956 to 1965 when he joined the Medical College faculty as chairman of the Department of Surgery.

Dr. Curtis P. Artz is also the recipient of a $4,700 grant from the Orangeburg Cancer Society. The grant will be used for cancer research at the Medical College.

Dr. Fletcher Derrick, associate in Urology, at the Medical College, has been awarded an Advanced Clinical Fellowship from the American Cancer Society, effective July 1. Dr. H. B. Othersen, Jr., assistant professor of Surgery, has been granted the same fellowship for a second year.

Dr. William H. Lee, Jr., chairman of the Division of Thoracic Surgery, gave the Lillienthal Lecture at Mount Sinai Hospital in New York City, January 19-22. He spoke on "The Páthologic Psysiology of Blood Proteins in Microcirculation."

Opening exercises of the new one-year course for medical laboratory assistants were held January 30 in the Medical Technology classroom at the Medical College. Dr. William McCord spoke to the ten students enrolled in the first class. Dr. George F. Stevenson is Director of the School of Allied Health Sciences, which is responsible for initiating the course to help fill the manpower shortage in the health fields. After completing the course, the students will qualify to assist in physicians' offices or hospital laboratories. Directing the course will be Mrs. Gwendolyn Taylor and Mrs. Carol Hawks.

THE GRADUATE EDUCATION OF PHYSICIANS

THOMAS PARKER, M. D.
Greenville, S. C.

The report of the Citizens' Commission on Graduate Medical Education, commissioned by the American Medical Association, has just been released. The commission consisted of fifteen members, of whom John S. Millis, Ph. D., president of Western Reserve University, was Chairman. Of the 15 members, five were physicians, of whom one is a practicing physician, and the others are physicians connected with institutions of one sort and another. The report represents a three-year study by a group of thoughtful and able citizens and deserves careful consideration by the medical profession.

It is based upon the initial concept that scientific knowledge has grown explosively in the present century and in particular in the last score of years, so that it is now impossible for any individual to comprehend all of it, or even a very large part of it. This requires specialization of all scientists including doctors of medicine.

The second premise is that there is "a wide gap between the best that medicine can offer and the lesser services actually available to many patients." The next basic concept is that "the hospital rather than the home or office has become the preferred and frequently the only practical place of treatment and diagnosis." It is further alleged along these lines that medicine is practiced very poorly in the offices of a number of private physicians, and that this is particularly true of the offices of general practitioners. "In any event the North Carolina study demonstrates a real need for up-grading medical practice in those areas in which the public is not receiving the quality of medical care to which it is entitled." It is further stated that many patients complain that they cannot find "physicians who are interested in them as human beings." The thought is that physicians by and large are fragmented in their thinking and are inclined to consider their patients in terms of their organs or diseases rather than in terms of their total beings. This, of course, is necessitated by the specialization of physicians, who naturally think in terms of their special interests; and the specialization is necessary in order that the physicians may be up to date in the latest scientific advances.

The commission is of the opinion that many of the faults which they have outlined can be corrected by proper planning. The way to start, they feel, is by a radical change in medical education. They feel that general medical education should take place in medical school; and that when a student graduates, he should then take specialized training which should be planned as a unit from the start. The commission is not in favor of lengthening the time required for medical education but of making it a cohesive whole.

Their second proposal is that the best medical care really cannot be given outside of a hospital milieu and that, therefore, medical practice should be hospital based. Their next contention is that since it is impossible for a given doctor to have adequate knowledge in more than one field, group practice is essential. They feel, moreover, that the day of the general practitioner has passed and that the expressions "general practitioner" and "family physician" are anachronistic and discredited. Since the practice of medicine is so complex, naturally it is impossible for a mere patient to choose the right doctor for his needs, and therefore they propose a new category of physician, to be called a "primary physician" instead of a "general practitioner" or a "family doctor." This individual is to be a specialist just like other specialists and his training is to take four years after medical school. He will then be the person to whom a patient will go first, and he will either take care of the patient himself or refer him to other members of his group, since of course he will not practice alone. Although he is a specialist, it is pointed out that he is not to be a surgeon or to act like one; and it isn't entirely plain exactly what he will do, since presumably he would refer obstetrical patients to obstetricians, etc.; but he will be there as a wise advisor to see that the patient gets proper care. Moreover, he will assume charge of the patient essentially for life; so that while he himself may not treat the patient at length, he will supervise his treatment at the hands of others and make sure that the patient is well cared for right along. He is to be certified by an appropriate board, and he will occupy status in the eyes of the profession and in the eyes of the community comparable to that of other specialists and will receive similar remuneration. The commission makes no mention of physicians who following graduation from medical school do not feel able to take four years of "residency" to qualify as a primary physician, or four or five or more years to qualify for other specialties. It may well be, although this is not stated, that residents will be paid generously enough to permit them to continue their residencies as long as they see fit without the necessity of stopping formal training for financial reasons. It should be mentioned at this point that the commission states unequivocally that internships, both straight, rotating and mixed, are passé and should be done away with, to be replaced by the totally planned residency.

It is obvious that this involves a whole lot of planning. The commission points out that planning and control of medical education, hospitals, and specialty boards has itself been extremely fragmented in the past, and that this could be handled much better by the creation of a special commission for the purpose of doing all of the planning. "We, therefore, recommend that a newly created Commission On Graduate Medical Education be established specifically for the purpose of planning, coordinating, and periodically reviewing standards for graduate medical education and procedures, and for reviewing and approving institutions in which that education is offered." "The Commission should include members drawn from different fields — although physicians will probably always constitute a majority, there are medical educators from the sciences basic to medicine who should be expected to serve. Some members should come from outside of medicine." While the commission does not claim divine infallibility for itself or its successor, it certainly suggests that planning of this sort would approximate it.

The following quotations will possibly encourage you to read the entire report: "The completely independent (sic) practice of medicine is no longer possible, and even the maintenance of an individual office is steadily declining as more and more physicians seize the advantages of a hospital, clinic, and group practice." "Institutionalized practice in a hospital, a clinic or some form of group practice, permits a higher quality of total service than the relatively independent practitioner can offer." "A group or clinic organization makes more effective use of a variety of medical talents." "Patients, too, must recognize these trends and adapt to them. . . Patients must recognize that the benefits of these changes far outweigh the loss of the greater amount of personal attention, the more frequent house call, and the more leisurely pace of medical practice a generation ago."

It is certainly inherent in the report that it is possible to achieve the goals outlined, or almost achieve them. In my opinion, even if money were no consideration, it would still be impossible to obtain perfection of medical practice because of the demands of the various other segments of the economy; just as it is impossible to provide the entire population with Cadillacs, or beefsteak for supper every night. Nevertheless, though perfection is unattainable, that is no reason for not attempting improvement. The report certainly deserves study; and particularly so because it bears the provisional stamp of approval of the American Medical Association, "our own familiar friend," in the words of the Psalmist.

Remarks on AMPAC

FRANK C. COLEMAN, M. D.*

Mr. Speaker and Members of the House of Delegates:

The 89th Congress is history. In January, the 90th Congress will convene to begin its own stewardship to the nation.

Few of us in medicine will lament the passing of the 89th. It was a Congress which plunged hastily — and often recklessly — into legislation it will repent at leisure.

But if we cannot unwrite the history of the 89th Congress, as we cannot, we can at least look forward to its successor with high hopes of better things to come.

For the 90th Congress will be composed—on both sides of the aisle—of enough men and women of moderate to conservative bent to constitute a majority.

Medicine can not only rejoice in that fact, but feel without undue modesty that its forces helped to bring it about.

Never before in this country's history have physicians and their wives worked so hard to support the candidates they believed in.

Along with many other groups and countless individuals, the members of the PAC movement fought long and hard in the political arena. We were there when the battle was joined. We contested with every force we could summon. And we did not relax until the last shot had been fired.

If the medical profession views the outcome of the election with satisfaction, who is to reproach us for it? For this is the first political victory of such magnitude which we, ourselves, have helped to bring about.

The members of this House would be gratified to know how many successful candidates for Congressional offices have already been generous enough to acknowledge the extent of medicine's contribution or its substantial value to their individual campaigns.

But there have been many, in both parties; and they identify the physicians and the PAC movement with their own victories.

Meanwhile, certain points worth noting emerge from the post-election analysis.

Consider first those men and women of the 89th Congress who voted with medicine either on the motion to recommit, or against passage, or both.

No doubt some of them did so with trepidation, fearing the possible political consequences of opposing legislation hailed by its proponents as the most popular measure of the century.

What happened to these Congressmen who voted as their consciences dictated, in apparent violation of their instincts for political survival? What happened to those who put aside expediency for conviction?

All but three won re-election and will return as members of the 90th Congress.

Of those three—two of them Democrats, the other a Republican—not a single man lost because he happened to agree with medicine's arguments and voted accordingly.

In each of the three cases I have cited, Mr. Speaker, political defeat was clearly—and admittedly—attributable to other causes.

It is gratifying to tell you, then, that no member of the 89th Congress who opposed Medicare sacrificed his political career because of it.

All told, AMPAC was active in 146 contests—131 for the House and 15 for the Senate. This total included primary, as well as general election campaigns.

I am happy to tell you that AMPAC was successful in better than 80 per cent of cases.

It is just as significant that physicians and their wives were active in an additional 130 or more Congressional campaigns, plus untold hundreds more for the State Legislatures. And here, of course, I am referring to political activity at the State PAC level.

If it is a truism to say that political action must be based on strength at the grass-roots, then I submit, Mr. Speaker, that Medical Political Action demonstrated this year its growing strength at the local levels.

With only a few exceptions, our State PACS proved strong and vigorous in this campaign.

No small share of the credit for that accomplishment belongs to this House of Delegates, whose members have done so much to help build and lead this movement in their own states.

As the House knows, it has been our custom to acknowledge outstanding State PAC effort at this December meeting, I shall not depart from that practice today. But in deference to the busy schedule of the House, and the time problem which always confronts it, today I shall simply announce the three winning states in each of AMPAC'S three membership categories.

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*Chairman, Board of Directors, American Medical Political Action Committee before the House of Delegates, American Medical Association, Las Vegas, Nevada, November 29, 1966.

The state which contributed the most total dollars to AMPAC was Pennsylvania.

The state which produced the highest percentage of AMPAC members, based on physician population within the state, was New Mexico.

And finally, the state which produced the highest dollar contribution per physician in the state, was Wyoming.

To these three states, and to the nine other states in each category, AMPAC extends its congratulations on a job well done. All of the award winners will be honored officially on June third, 1967, when we hold our AMPAC National Workshop in Washington, D. C.

And now a brief word about the future of the PAC movement, Mr. Speaker.

We believe that future to be bright and promising.

Success breeds success; enthusiasm breeds enthusiasm.

And demonstrable accomplishment will, we predict, do much to overcome the reservations still held by those in our ranks who question our ability—and their own—to get results.

We feel that this election will convince many of them that their profession's commitment of time, dollars and hard work to the cause of better government has not been in vain; and indeed, that it has had a remarkable result.

We expect our membership, which has risen steadily since we began in 1961, to continue its substantial expansion. And we note with pride the rapid increase in the numbers of politically sophisticated physicians and physicians' wives who are active in this movement.

We are confident that our effectiveness will mount in the years ahead as we develop newer and better political techniques, as we improve old ones, as we continue the unremitting effort to enlarge the political knowledge of our members.

And of this we can be sure:

Day by day, month by month, year by year, campaign by campaign, the PAC movement is winning new friends for medicine in both political parties.

We hope the House will agree, Mr. Speaker, that the PAC movement is confirming the vision and wisdom of those leaders of organized medicine who brought it into being. It is with the deepest gratitude that we acknowledge their unflagging support.

Without that support, we could have accomplished nothing.

On behalf of the AMPAC Board of Directors, and of the PAC leaders of 50 states and the District of Columbia, let me say how grateful we are to this House of Delegates for its steadfast backing.

This victory belongs to all of us. Thank you all for joining with us in the battle.

STATEMENT OF
J. W. JERVEY, JR., M. D.
Before the Senate Sub-Committee on Antitrusts and Monopoly

I received academic and medical education at the University of Virginia; served three and a half years on the staff at St. Luke's Hospital in New York City where I received post-graduate training in medicine, surgery, and ophthalmology; have practiced ophthalmology in Greenville, South Carolina for 38 years and am a member of the American Medical Association, the American Academy of Ophthalmology and Otolaryngology, and the American Opthalmological Society. I am here at the request of Senator Hart to do what I can to curtail the practice by physicians of dispensing for profit.

I do not wish to disparage all physicians who dispense. I am familiar with most of the difficulties which are besetting us, and many are honestly trying to do what is best. I simply believe that dispensing for profit is injuring the medical profession.

It would be grossly unfair to single out the dispensing ophthalmologist and leave the optometrist and the optician undisciplined. The answer may lie in price control of merchandise. It does not lie in making an example of my colleagues however much I may disagree with them.

A recent poll of members of the Greenville County Medical Society showed that approximately 15 to 1 are against the sale of glasses by physicians. No such study, to my knowledge, has been made before, and the results seem to show that the American Medical Association House of Delegates may not have upheld the ethical opinion of the great majority of its members.

J. W. Jervey, Jr., M. D.

Title XIX of The Social Security Act and the New York State Medicaid Law

FRANCIS J. LOPERFIDO, M. D.
Bronx, N. Y.

On April 30th of this year Governor Rockefeller signed into law what became Chapters 256 and 257 of the Laws of 1966, better known as the Medicaid Law, which was the implementation by New York State of Title XIX of the Social Security Act. Although there was practically no comment from the public with respect to Medicaid prior to its enactment, almost immediately after the bill became law the public outcry began and continued until it reached, especially in the upstate areas of the State, heights of outrage never before heard in connection with any legislative enactment. It was rumored that the upstate Senator who was the floor leader of the bill remained in Albany in the State Capitol over the Memorial Day weekend because he was afraid to go home and face his angry constituents. The story was that there was a steady stream of people driving in front of his house blowing their horns and pointing menacing fingers.

Of course, reaction to the bill was not all negative. In certain quarters it was hailed as the greatest piece of social legislation ever passed by the New York State Legislature. However, one prominent legislator who had voted for the law privately admitted that in his opinion it was "the biggest legislative goof in two centuries."

What caused this furor?

The benefits furnished under the bill are broad. It covers (1) services of physicians, dentists, nurses, optometrists, podiatrists, and other related professional personnel, (2) care in hospitals, nursing homes, infirmaries and other eligible medical institutions, (3) outpatient hospital or clinic services in facilities operated in accordance with the law, (4) home health care services, including home nursing services and services of home aids, (5) drugs, sick room supplies, eye glasses, dentures, prosthetic appliances, (6) physical therapy and rehabilitative services, (7) laboratory and x-ray services, and (8) as frosting in the Medicaid cake, transportation necessary to obtain the care and services provided by the law.

Although the law covers every medical need a person could require, the comprehensiveness of the coverage was not really the reason for all the excitement. What caused all the clamor was the estimate of the number of people who would be eligible to obtain benefits under the bill, and the projected cost of the program. Income limits for determining eligibility are not set forth in the Medicaid Law. Determination of income criteria for eligibility is delegated by the law to the Board of Social Welfare of the State of New York.

Prior to the passage of the Medicaid Law, the Democratic leadership of the Democratic controlled New York State Assembly (which is one of the two Houses of the State Legislature) and the Republican administration had become involved in a dispute concerning the income limits under the bill. The Democrats wanted higher income limits than those proposed by Republicans. Governor Rockefeller and the Democratic leadership finally compromised and the income limits agreed upon under the compromise were later adopted by the Board of Social Welfare as the criteria for eligibility for benefits under the law.

The income limits so approved are on a sliding scale depending on the number of persons in a family and the number of wage earners in the family. The scale goes from a NET income of $2,900.00 for one person to a NET income of $7,700.00 for a family of six with one wage earner. For each additional person in the family the income limit increases by $850.00. A family of four with one wage earner, which is the size of family usually used as a standard, is eligible for Medicaid benefits if its annual net income does not exceed $6,000. One important feature is that net income under the Medicaid Law is defined as gross income less income taxes, health insurance premiums, and payments made pursuant to a court order.

The law also exempts from consideration in determining financial eligibility a homestead, essential personal property and resources of $1,000.00 for each person as a burial reserve. In addition, a family may retain savings equal to one-half of the net income limit applicable to the family and still be eligible for Medicaid benefits. However, no person is eligible if he has life insurance in a face amount in excess of $1,000.00. The law also contains a provision that, in the event of a catastrophic illness, a person is eligible for benefits when the cost of such illness reaches 50% of the annual net income of such person.

The original estimates with respect to how many people in the State of New York would qualify for coverage under the income criteria promulgated by the Board of Social Welfare varied between six million and eight million. This would include between 40% and 50% of the population of the State. Because of the controversy which had been generated by the passage of the Medicaid bill, a public hearing was held in Albany on May 24th by the New York State Joint Legislative Committee on Problems of Public Health and Medicare to consider the Medicaid statute which had become law less than a month previously. I might say that this was the only time in anyone's memory that a New York State Legislative Committee held a hearing on a bill which had already been passed by the Legislature.

The hearing began at ten o'clock in the morning and continued, without a break for lunch, dinner, or any other purpose, until ten o'clock that night. The Governor, the Commissioner of Social Welfare, the Chairman of the Board of Social Welfare, and the Commissioner of Health all appeared and made statements. In addition, representatives of medical societies, industry, hospitals, insurance companies, optometric societies, dental societies, pharmaceutical societies, psychological societies, chiropractic societies, senior citizens organizations, and social service agencies also testified. In all, about 70 people spoke that long day. An indication of the public interest in the hearing, at least in the upstate areas of New York, was the fact that television stations in Syracuse and Buffalo broadcast the hearings live for the entire twelve hours.

At the hearing Governor Rockefeller stated that the estimated cost of the Medicaid program to New York State, for the fiscal year ending March 31, 1967 would be 532 million dollars, compared with 449 million dollars which had been spent in New York State for medical care under various welfare programs during the preceding fiscal year. He said that it was anticipated that two million people would receive benefits under the new Medicaid program for the current fiscal year as compared with one and one-half million people who had received medical assistance under welfare programs in the preceding fiscal year.

Governor Rockefeller made no projections of cost beyond the current fiscal year. He emphasized, however, that where the State of New York and its units of local government had received only 79 million dollars in federal aid toward the 449 million dollars spent in the previous fiscal year, under the new Medicaid Law the federal government would now contribute 217 million dollars toward the estimated 532 million dollars to be spent in the current fiscal year. The degree of joyfulness of the Governor in announcing this bonanza was probably matched only by the degree of sadness of Mr. Wilbur Mills, chairman of the House Ways and Means Committee, when he heard of this estimate for federal reimbursement in New York State alone.

Governor Rockefeller and the other officials of the New York State government who appeared at the hearing seemed, however, to be somewhat on the horns of a dilemma. On the one hand, in order not to alarm the general public (any more than it had already been alarmed) about the possible future cost of the Medicaid program, some state officials testified that the program was no more than a moderate extension of existing state welfare programs which would now permit the state to obtain greater federal reimbursement. Other state officials, unable to resist the temptation of stressing the magnitude of the program, stated that it was, in effect, a radical departure from previous welfare programs and constituted the most important piece of social legislation ever passed by the New York State Legislature. If my memory serves me, I believe one state official took both approaches at the same time. The question left unanswered at the hearing was, however, "Is it a welfare program, or is it a health program?"

After a public hearing, the rush was on to amend the Medicaid Law. An actuarial study made by the New York State Blue Cross and Blue Shield Plans projected an annual cost to New York State, before any federal reimbursement, of 1.4 billion dollars for the program when it became fully implemented. A similar study made by the commercial insurance industry projected the cost at 1.6 billion dollars annually. From what I have read in the newspapers, the actuaries for the Department of Health, Education and Welfare have now projected the cost of the New York State program at 1.4 billion dollars. This is a nice compliment to the accuracy of our own Blue Cross and Blue Shield actuaries.

Despite the growing realization that the Medicaid program could in subsequent years cost between two and one-half to three times the amount of the Governor's projections for the first year, the Democratic leadership in the New York State Assembly remained adamant against any changes in the statute. Their attitude was "Let's give it a chance and see how it works; we can always amend it next year." The Governor's office did not have much to say publicly about amendments, but the rumor became pretty well known that the Republican administration would welcome some changes. In the closing days of the Legislature, ten bills were introduced to amend the Medicaid Law. All ten were passed in the Republican-controlled Senate, but Mr. Travia, the Democratic leader in the State Assembly would permit only four of them to be passed in that House. These were signed by the Governor and ultimately became law.

One amendment provides that, unless an applicant under the Medicaid Law grants permission to the local public welfare officials to conduct an investigation of his financial resources, benefits under Medicaid may be suspended or denied. Strange as it might seem, although the original Medicaid Law provided that an applicant for assistance must furnish a financial statement, in effect it prohibited public welfare officials from verifying the truth of the information given by the applicant. This amendment plugged that loophole.

Another amendment gives public welfare officials a lien against any recovery in a lawsuit for personal injuries by a recipient of Medicaid benefits for the amount of such benefits.

One proposed amendment to the Medicaid Law, which did not receive favorable consideration by the Legislature, is of particular interest to this group. That amendment provided for the free choice by an applicant for Medicaid benefits of a physician and for free choice of a hospital or nursing home. While this bill failed of passage in the Legislature, the Board of Social Welfare, largely because of the insistence by the New York State Medical Society that free choice of physician and hospital is essential if the Medicaid Law is to work at all, has since promulgated a rule under the Medicaid Law which provides for such free choice. The Board of Social Welfare felt that such a rule was necessary to insure proper implementation of the medical assistance program and high quality of medical services.

There is one problem under the New York State Medicaid Law which is of vital importance to the medical profession and which has not as yet been finally resolved. While the Medicaid bill was pending and subsequent to its passage, an interdepartmental task force composed of representatives of the New York State Department of Health, the New York State Department of Social Welfare, and the New York State Division of the Budget worked with representatives of the New York

State Medical Society in an attempt to develop a fee schedule under the Medicaid Law which would be satisfactory to both the state and the medical society. The medical society proposed that fees paid under the Medicaid Law be determined in the same manner as fees paid by a carrier under Title XVIII of the Social Security Act, and that the State consider using carriers as intermediaries to administer payments to physicians under the Medicaid Law.

The task force has not, up to the present time, accepted the recommendations of the medical society. Instead, it recommended as a transitional fee schedule a relative value schedule with a conversion factor of $5.00 for medicine and $4.00 for surgery. This schedule was adopted by the New York State Department of Social Welfare as the maximum schedule under which a local welfare district may seek reimbursement from the State. This does not, however, preclude a local welfare district from paying at a rate lower than the one in the schedule adopted by the State. Whether this transitional fee schedule will give way to a statewide mandated schedule which approaches customary and usual charges, only time will tell.

As all of you are undoubtedly aware, the medical assistance program contained in the New York State Medicaid Law has recently been approved by the federal Department of Health, Education and Welfare. Inasmuch as Governor Rockefeller's estimate—which many people feel is low—of the federal reimbursement toward the cost of the New York program for the first year is almost as much as the Congress intended to spend for the entire country under Title XIX, the House Ways and Means Committee has been considering amendments to Title XIX in an attempt to reduce the cost to the federal government. The two amendments most frequently reported are (1) incorporation of an income eligibility limit in Title XIX lower than what the New York program now has, and (2) placing a specific dollar limitation on the amount of federal reimbursement which each state could receive. If either of these amendments are adopted, the impact on the New York State Medicaid program could be dramatic. New York State would either have to cut back its program, or to bear, without federal reimbursement, a much larger portion of the cost. This is so because the New York State Medicaid Law is not contingent upon approval of the Medical Assistance program contained in it by the Department of Health, Education and Welfare.

As of now, the New York State Medicaid program has not really gotten off the ground. We understand that case loads of local welfare departments for medically indigent persons have not increased appreciably. This, however, can be attributed to the newness of the program, the confusion of local public welfare districts with respect to fee schedules and free choice of physician, and the publicity concerning the delay of the Department of Health, Education and Welfare to approve the New York plan. Knowledgeable people seem to agree that, if the program is not modified, the cost projections will be realized within a relatively short time.

What I have outlined here this evening is only the first chapter of the New York Medicaid story. If Title XIX is amended to limit the scope of federal reimbursement, the second chapter may prove to be even more intriguing than the first.

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STATE BOARD OF MEDICAL EXAMINERS OF SOUTH CAROLINA

The State Board of Medical Examiners of South Carolina met at the Wade Hampton Hotel, Columbia, on November 7, 8, 9. The new officers of the board are Dr. A. Richard Johnston of St. George, president, and Dr. Roderick Macdonald of Rock Hill, vice president. Physicians applying for medical licensure by endorsement of credentials were interviewed and 38 were licensed to practice medicine and surgery in the State of South Carolina. They are as follows:

Dr. Michael E. Aronoff is a graduate of Hahnemann Medical College and has a certificate of the National Board. He is currently at Fort Jackson.

Dr. Robert E. Baldwin is a graduate of the University of Tennessee and is licensed in Tennessee. He plans to locate in Greenville at a later date to practice anesthesiology.

Dr. John C. Beard, Jr. graduated from Jefferson Medical College and has a license in Pennsylvania. He recently joined the staff of the duPont Savannah River Plant.

Dr. Donald H. Blodgett, a University of Arkansas graduate, is licensed in Arkansas. He is a radiologist in Walhalla.

Dr. Ray A. Cave graduated from the University of Louisville and is licensed in Kentucky. He is now stationed at Fort Jackson.

Dr. Alexander W. DeMasi, a graduate of Bowman Gray, is licensed in North Carolina. Currently in Virginia, he plans to move to Charleston to practice internal medicine.

Dr. Patricia M. Edwards is a graduate of Ohio State University and has a license in Ohio. She plans to do general practice in Charleston.

Dr. Franklin C. Fetter graduated from Jefferson Medical College and is licensed in Pennsylvania. He is dean of the School of Medicine at the Medical College of S. C.

Dr. Jesse J. Floyd is a graduate of the Medical College of Georgia and licensed in Georgia. He is completing a residency in obstetrics and gynecology at Columbia Hospital.

Dr. Louis A. Fraysse, III, graduated from Duke University and is licensed in Texas. He plans to do general practice in Columbia.

Dr. David H. Fuller, Jr., is a graduate of Bowman Gray and licensed in North Carolina. He is a psychiatrist at the South Carolina State Hospital.

Dr. Daniel O. Fussell is a graduate of the Medical College of Georgia and is licensed in Georgia. Currently in New Mexico, he plans to practice internal medicine in North Augusta.

Dr. Charles R. Green, a Medical College of Georgia graduate, is licensed in Georgia. He practices radiology at the Aiken County Hospital.

Dr. Peter Hairston graduated from Johns Hopkins University and is licensed in Maryland. He is a thoracic surgeon at the Medical College Hospital.

Dr. James E. Hamill, a University of Maryland graduate, is licensed in Maryland. He is a psychiatrist stationed at the U. S. Naval Hospital in Charleston.

Dr. Harriet M. Harman is a graduate of Vanderbilt University and licensed in Tennessee, She is a psychiatrist at the William S. Hall Psychiatric Institute.

Dr. Edward D. Jervey, II, graduated from Duke University and is licensed in North Carolina. Presently in the U. S. Navy at Beaufort, he plans to practice ophthalmology in Greenville at a later date.

Dr. Allan D. Lieberman is a graduate of Chicago Medical School and has a certificate of the National Board. He is with the Retarded Children's Center in Charleston.

Dr. David E. Love, a graduate of Loma Linda University, has a certificate of the National Board. He is a resident in obstetrics and gynecology at Greenville General Hospital.

Dr. Arthur A. Madden graduated from Johns Hopkins University and is licensed in Maryland. He practices internal medicine in Columbia.

Dr. Miles H. Martin, Jr. graduated from Duke University and has a North Carolina license. He is now with the U. S. Navy in Charleston.

Dr. Ellis F. McClelland is a graduate of Emory University and is licensed in Georgia. He has a practice in internal medicine in Anderson.

Dr. Alexander T. Murphey, Jr., a Medical College of Georgia graduate, has a license in Georgia. He practices internal medicine in Augusta.

Dr. Edwin Newman graduated from the State University of Iowa and was licensed in Iowa. He is a radiologist currently stationed at Fort Jackson.

Dr. Otis E. Payne is a graduate of Louisiana State University and has a Louisiana license. He is at present with the U. S. Public Health Service in Charleston.

Dr. Ernest P. Porter graduated from Albert Einstein College of Medicine and has a certificate of the National Board. He is an ophthalmologist at Fort Jackson.

Dr. Louis A. Privitera is a graduate of New York Medical College and has a certificate of the National Board. He is in the U. S. Navy at Charleston.

Dr. John A. Roper, Jr., a Temple University graduate, has a certificate of the National Board. He is taking a general surgery residency in Greenville.

Dr. Robert L. Roty graduated from the University of Michigan and is licensed in Michigan. He is currently stationed at Fort Jackson.

Dr. Charles T. Smallwood, Jr. is a graduate of St. Louis University and has a certificate of the National Board. He is a urologist stationed at the U. S. Naval Hospital in Beaufort.

Dr. Harry F. Smith, a graduate of Jefferson Medical College, has a certificate of the National Board. He is in service with the U. S. Navy in Charleston.

Dr. George F. Stevenson graduated from the University of Western Ontario and has a license in Illinois. He is Professor of Clinical Pathology at the Medical College of South Carolina.

Dr. Robert G. Wells is a graduate of the University of California at San Francisco. He is licensed in California; and now in service at Fort Jackson.

Dr. Dabney R. Yarbrough, III graduated from the Medical College of Virginia and has a Virginia license. He does general surgery at the VA Hospital in Charleston.

Dr. Edmund P. Gaines, Jr. is a graduate at Bowman Gray and licensed in North Carolina. He is beginning general practice in Greenville.

Dr. John P. Thomas graduated from New York Medical College and has a license in Pennsylvania. He is a radiologist stationed at Fort Jackson.

Dr. James F. Connolly is a graduate of the University of Ottawa and is licensed in Canada and New Hampshire. He practices general surgery in Kingstree.

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September 18-21—8th International Colloquium on Vectorcardiography

October 9-12—65th Conference of the German Paediatric Society

October 12—Annual Meeting, German Society on Child Psychology

October 16-21—21st Austrian Medical Congress, Van Swieten Meeting

Deaths

Dr. Charles Henry Young

Dr. C. H. Young, 81, prominent Anderson physician and surgeon, died in Anderson Memorial Hospital December 29.

Dr. Young had been in declining health for a number of years and seriously ill for the past several months.

A native of Due West, Dr. Young attended Erskine College and was graduated from Vanderbilt Dental College in 1905. For four years he was engaged in the practice of dentistry at Clinton.

Deciding to study medicine, he was graduated from Jefferson Medical College in Philadelphia in 1913. He then took postgraduate work in surgery, interning at Episcopal Hospital, Philadelphia.

He was married in 1918 to Dr. Anne Austin Young and in the same year came to Anderson to be associated with his brother, Dr. J. R. Young.

Long a staff member at Anderson Hospital, Dr. Young was a Fellow of the American College of Surgeons, a Fellow of the American College of Physicians, a member of the American Medical Association and the Anderson County Medical Society. He was a Mason and a Rotarian.

Keenly interested in Christian missions, Dr. Young and his wife built two churches and a clinic in the Belgian Congo in memory of their parents. They also undertook upkeep of Korean war orphans, and Dr. Young often heard from his "adopted" children overseas.

Dr. Edward Harry Barnwell

Dr. Edward Harry Barnwell of Rockville died January 25, 1967 in a Charleston nursing home.

Born at Adams Run on January 4, 1878, Dr. Barnwell attended Porter Military Academy and the High School of Charleston and was graduated in medicine from the South Carolina Medical College in 1898 and in pharmacy two years later. He practiced medicine on Wadmalaw Island for more than 50 years and also dispensed his own prescriptions until pharmaceutical services became available in the area.

During World War I he was a member of the local Selective Service Board and also its medical examiner. He received a major's commission in the U. S. Army Medical Corps Reserves in 1925 and retired as a colonel after World War II. During World War II, he was the state medical officer for the Selective Service System, receiving a commendation award in 1946.

For more than 40 years he was a trustee of the Medical College and retired from vice chairman of the board in 1960 as vice chairman emeritus. At that time the college named him an "Honored Alumnus" and presented him a citation.

He was a member of the South Carolina, Southern, and American Medical Associations.

Dr. Luder F. Behling

Dr. Luder F. Behling died in a Charleston hospital January 27.

Dr. Behling was born in St. George, August 6, 1893. He was graduated from the University of South Carolina and the Medical College of South Carolina. He was listed in the 1947 edition of "Who's Who in World Medicine". He had practiced in St. George for a number of years. For the past 10 years he had practiced in Charleston.

Dr. Andrew A. Walden

Dr. A. A. Walden, 88, Fairforest native, never retired and affectionately called "the country doctor", died in North Augusta January 19.

Dr. Walden had been a leading physician, church and civic worker in North Augusta for many years. A graduate of the University of Pennsylvania Medical College, he practiced in Ellenton, S. C., before opening his office in North Augusta in 1907. On his 82nd birthday hosts of friends honored him for his long medical, civic and other services.

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Dosage: Dissolve one troche slowly every 3 or 4 hours.

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MEETING

A symposium on medicine and religion will be held at the School of Medicine, University of North Carolina, Chapel Hill, June 11, 12, 13 entitled "The Physician, the Clergy and the Whole Man." Physicians and clergymen are invited to participate in this occasion, which is sponsored by the Committee on Medicine and Religion of the Medical Society of the State of North Carolina, the Department of Religion of the American Medical Association and the University of North Carolina School of Medicine.

Address communications to: Office of Continuation Education, University of North Carolina School of Medicine, Chapel Hill, N. C., 27514.

Dr. C. D. Graber, associate professor of microbiology, was elected councillor of the South Carolina chapter of the American Society of Bacteriologists and will represent the chapter at the national meetings in New York this spring.

DEATH

Dr. Walter M. Evans

Dr. Walter M. Evans, a practicing physician in Berkeley County for over 45 years, died January 2.

Dr. Evans was a native of Berkeley County. He received his undergraduate degree at Claflin University and his M. D. at Boston University.

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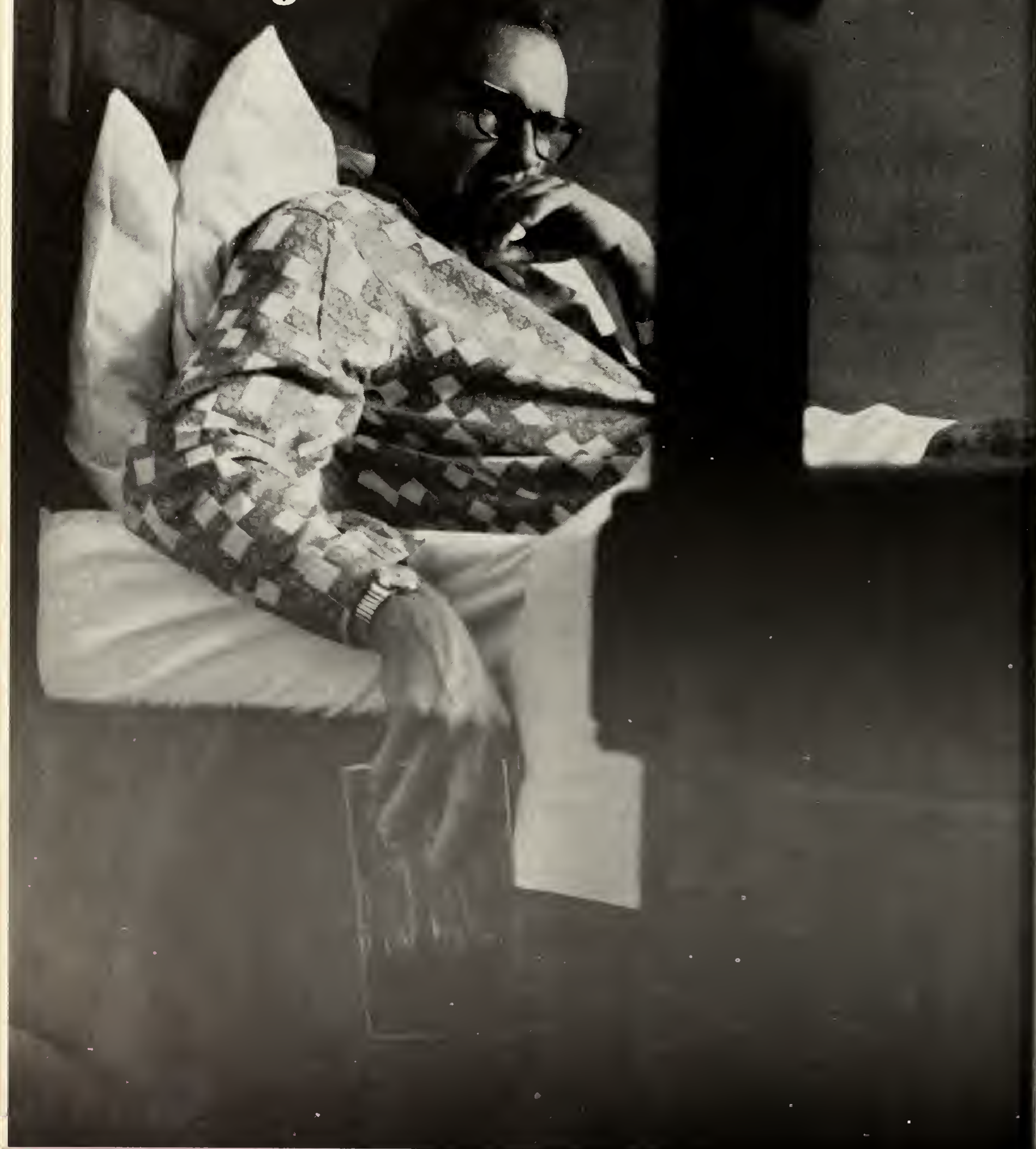

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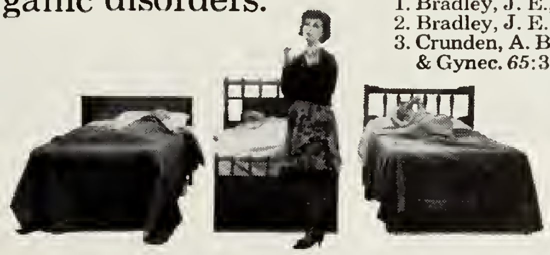
1. Bradley, J. E., *et al.*: J. Pediat. *38*:41 (Jan.) 1951.
2. Bradley, J. E.: Mod. Med. *20*:71 (Oct. 15) 1952.
3. Crunden, A. B., Jr., and Davis, W. A.: Am. J. Obst. & Gynec. *65*:311 (Feb.) 1953.



WILLIAM H. RORER, INC.
Fort Washington, Pa.

Emetrol®
phosphorated carbohydrate solution
emesis control

SUGAR FREE
diet-rite® cola
ARTIFICIALLY SWEETENED CARBONATED BEVERAGE
SIZE
SUGAR FREE
diet-rite® cola
LESS THAN 1 CALORIE PER BOTTLE
12 FLUID OUNCES
SUGAR FREE
diet-rite® cola
ARTIFICIALLY SWEETENED CARBONATED BEVERAGE
LESS THAN 1 CALORIE PER CAN

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Diet-Rite Cola... America's Number One low-calorie cola... no sugar at all... less than one calorie per bottle... the one with the wonderful taste of cola... pH approximately 2.6 to 2.8... same general range acidity as other cola beverages plus number of fruit juices.

You will like Diet-Rite Cola. So will your patients.

Royal Crown® Cola Co. Columbus, Georgia

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when it counts...

Chloromycetin®

(chloramphenicol)

PARKE-DAVIS

PARKE, DAVIS & COMPANY, Detroit, Michigan 48232

Complete information for usage
available to physicians upon request.

01366

Sustained circulatory, respirator
and cerebral stimulation for th

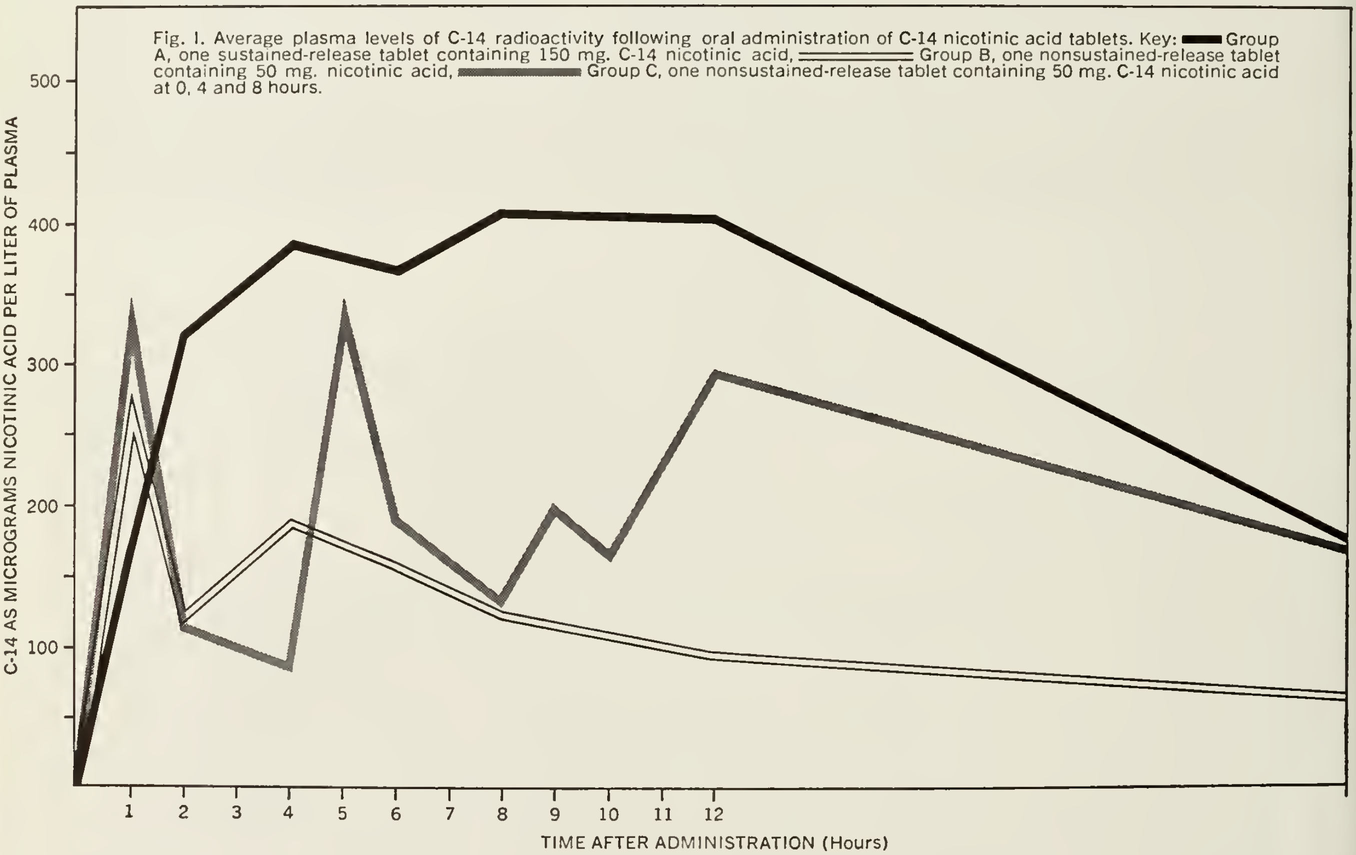


Fig. I. Average plasma levels of C-14 radioactivity following oral administration of C-14 nicotinic acid tablets. Key: ▬ Group A, one sustained-release tablet containing 150 mg. C-14 nicotinic acid, ═ Group B, one nonsustained-release tablet containing 50 mg. nicotinic acid, ▬ Group C, one nonsustained-release tablet containing 50 mg. C-14 nicotinic acid at 0, 4 and 8 hours.

(fewer absent doses by absent-minded patients)

Human volunteer subjects were administered Geroniazol TT tablets with the nicotinic acid component made radioactive with C-14. Plasma and urine samples were analyzed. (See Figures I and II) The radioactive tracer study substantiated the previous clinical evidence that the release of nicotinic acid from the Geroniazol TT tablet produced a gradual rise in plasma levels to a plateau for a total of 12 hours and more.

Such proven sustained activity makes the management of geriatric patients much easier by minimizing the possibility of neglected doses through absent-mindedness or senile confusion. Therapy *can* be continuous on a daily dose of only one Geroniazol TT tablet every 12 hours.

The gradual release of nicotinic acid in Geroniazol TT will provide the well-known peripheral vasodilatation needed in patients with deficient circulation and with a minimum amount (if any) of "flushing." Also, cerebrovascular circulation is complemented by pentylenetetrazol, long-established as a cerebral and respiratory stimulant.

Geroniazol TT improves the typical, unfortunate, signs of senile confusion. Patients become more alert,

ged and debilitated

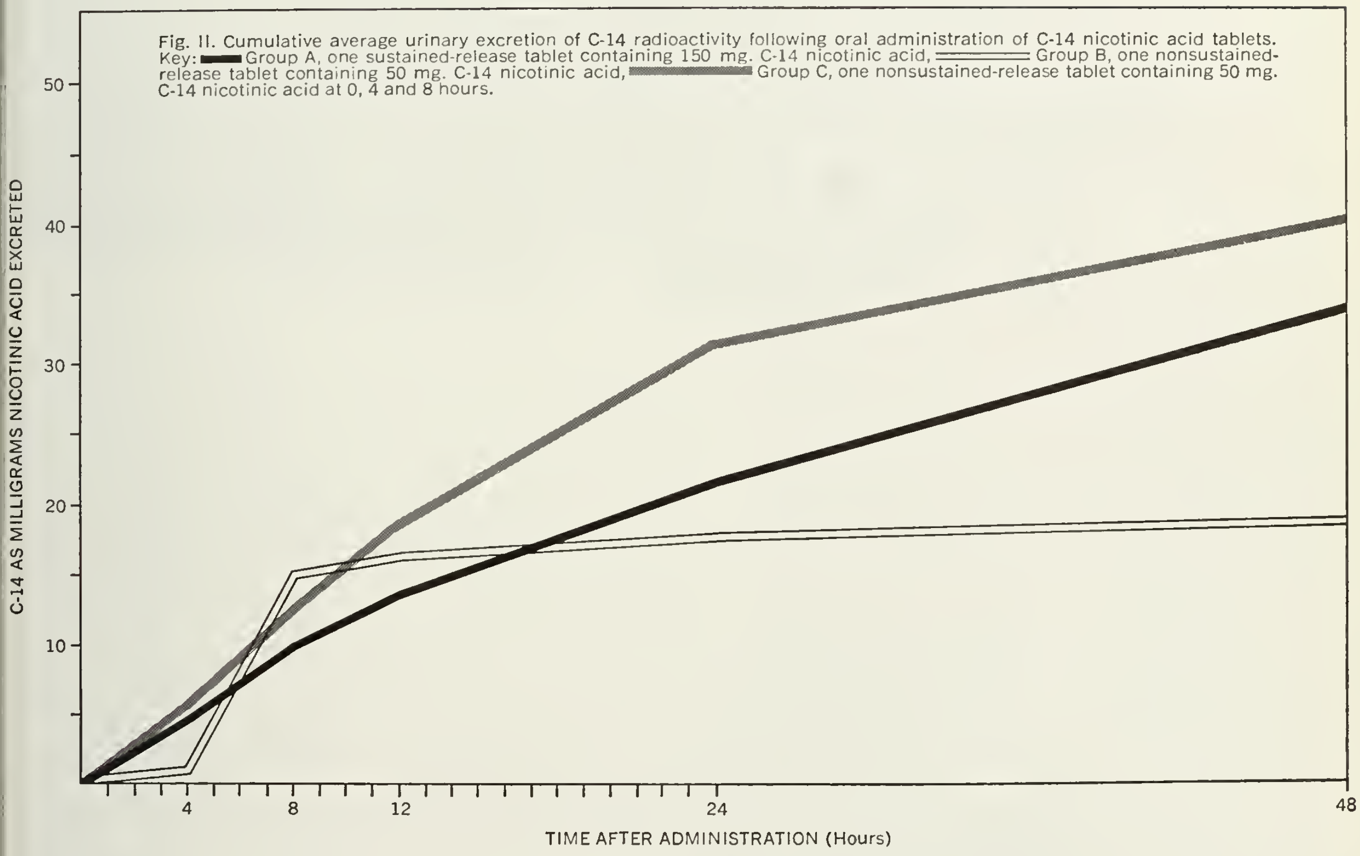


Fig. II. Cumulative average urinary excretion of C-14 radioactivity following oral administration of C-14 nicotinic acid tablets. Key: ▬ Group A, one sustained-release tablet containing 150 mg. C-14 nicotinic acid, ═ Group B, one nonsustained-release tablet containing 50 mg. C-14 nicotinic acid, ▒ Group C, one nonsustained-release tablet containing 50 mg. C-14 nicotinic acid at 0, 4 and 8 hours.

less confused and moody. Personal care, memory, emotional stability, social attention improve. Fatigue, apathy and irritability are reduced.

A prescription for 100 tablets of Geroniazol TT will permit your patients to enjoy the benefits of time-prolonged nicotinic acid/pentylenetetrazol therapy, at an economical price. Dosage is only one tablet every 12 hours.

Contraindications: There are no known contraindications.

Precautions: Exercise caution when treating patients with a low convulsive threshold.

Side Effects: Side effects are rarely encountered, however due to the vasodilatation effect of nicotinic acid, transitory mild nausea, flushing, tingling and pruritus are possible.

Dosage: One tablet every 12 hours.

Supplied: Prescribe bottles of 100 tablets, to take advantage of recent price reduction.

References: 1. Report by Nuclear Science & Engineering Corp., Pittsburgh, Pa., in files of Philips Roxane Laboratories. 2. Connolly, R.: W. Virginia Med. J. *56*:263 (Aug.) 1960. 3. Curran, T. R., and Phelps, D. K.: Am. Pract. & Digest Treat. *11*:617 (July) 1960.

Geroniazol® TT

nicotinic acid 150 mg., pentylenetetrazol 300 mg.
Tempotrol® Time Controlled Tablet

"First with the Retro-Steroids"
PHILIPS ROXANE LABORATORIES
Division of Philips Roxane, Inc., Columbus, Ohio
A Subsidiary of Philips Electronics and
Pharmaceutical Industries Corp.

in alcoholism:

B and C vitamins aid therapy. Therapeutic amounts of B and C vitamins can be important in the management of the alcoholic patient. In alcoholism, as in many chronic illnesses, STRESSCAPS vitamins aid therapy.

Stresscaps®
Stress Formula Vitamins Lederle

FOR PROFESSIONAL RECOMMENDATION ONLY

Each capsule contains:

Vitamin B_1 (as Thiamine Mononitrate)	10 mg
Vitamin B_2 (Riboflavin)	10 mg
Vitamin B_6 (Pyridoxine HCl)	2 mg
Vitamin B_{12} Crystalline	4 mcgm
Vitamin C (Ascorbic Acid)	300 mg
Niacinamide	100 mg
Calcium Pantothenate	20 mg

Recommended intake: Adults, 1 capsule daily, for the treatment of vitamin deficiencies. Supplied in decorative "reminder" jars of 30 and 100; bottles of 500.

LEDERLE LABORATORIES, A Division of American Cyanamid Company, Pearl River, New York
691—6—3942

When thiazide or reserpine alone won't keep

Establish and maintain early, more decisive control of blood pressure

When blood pressure won't stay down despite initial therapy—when complaints of headache, fatigue or dizziness are often voiced—it may be time for a change to Diutensen-R.

Diutensen-R is thiazide and reserpine plus cryptenamine—a rational, comprehensive therapy to help establish and maintain early, more decisive control of blood pressure.

The cryptenamine in Diutensen-R helps improve normal vasodilating reflexes while the thiazide and reserpine components maintain vasorelaxant, sedative, and saluretic benefits. Cryptenamine lowers pressoreceptor reflex thresholds (which may be abnormally high in hypertension)—"resets" pressoreceptors to function at more nearly normotensive levels.

Early, more decisive control with Diutensen-R *helps secure continuing benefits—may reduce or even obviate the need for poorly tolerated drugs later in therapy.*

Indications: Diutensen-R may be employed in all grades of essential hypertension.
Dosages: Usual dose is 1 tablet twice daily, at morning and evening meals. However, adjustment of dosage to suit individual circumstances may be required. Please refer to package insert for full particulars.
Side effects and precautions: The side effects observed with patients on Diutensen-R have been of a mild and nonlimiting nature. These include occasional urinary frequency, nocturia, nasal congestion, muscle cramps, skin rash, joint pains due to gout and nausea and dizziness which have been reported for the individual components. Most of these symptoms disappear while the drug is continued at the same or lower dosage level. The concomitant use of digitalis and Diutensen-R may increase the possibility of digitalis-like intoxication. If there is evidence of myocardial irritability (extrasystoles, bigeminy or AV block), dosage of Diutensen-R should be reduced or discontinued. Nocturia in patients with marginal cardiac status and salt and fluid retention can be effectively controlled by limiting the time of administration to early afternoon. Diutensen-R should not be used in patients with a known intolerance to reserpine. Package inserts furnish a complete summary of recommended cautions related to each of the ingredients of Diutensen-R.

*As tannate salts equivalent to 130 Carotid Sinus Reflex Units.

NEISLER UNION CARBIDE NEISLER LABORATORIES, INC. • DECATUR, ILLINOIS
SUBSIDIARY OF UNION CARBIDE CORPORATION

DIUTENSEN-R®
Cryptenamine 1.0 mg* Methyclothiazide 2.5 mg Reserpine 0.1 mg

TABLETS

Equagesic®

(meprobamate and ethoheptazine citrate with aspirin) Wyeth®

Precautions: Keep out of reach of children. Carefully supervise dose and amounts prescribed, especially for patients prone to overdose themselves. Excessive prolonged use of meprobamate may result in dependence or habituation in susceptible persons—as ex-addicts, alcoholics, severe psychoneurotics. Withdraw gradually after prolonged high dosage to avoid possibly severe withdrawal reactions including epileptiform seizures. Warn patients of possible reduced alcohol tolerance. If drowsiness, ataxia or visual disturbances occur, reduce dose. If symptoms persist, caution patients against operating machinery or driving. Give cautiously to patients with suicidal tendencies. Treat attempted suicide with immediate gastric lavage and appropriate supportive therapy

Side Effects: Ethoheptazine and aspirin may occasionally cause nausea, vomiting, epigastric distress, and rarely dizziness and CNS depression. Overdosage may result in salicylate intoxication. Meprobamate rarely causes allergic or idiosyncratic reactions. These reactions, sometimes severe, can develop in patients receiving only 1 to 4 doses who have had no previous contact with meprobamate. Mild reactions are characterized by urticarial or erythematous maculopapular rash. Acute nonthrombocytopenic purpura with petechiae, ecchymoses, peripheral edema and fever have been reported. Meprobamate should be stopped and not reinstituted. Severe reactions, observed very rarely, include angioedema, bronchial spasms, fever, fainting spells, hypotensive crises (1 fatal case), anaphylaxis, stomatitis and proctitis (1 case) and hyperthermia. A few cases of leukopenia, usually transient, have been reported following prolonged dosage. Rarely, cases of aplastic anemia (1 fatal case), thrombocytopenic purpura, agranulocytosis, and hemolytic anemia have been reported; almost always, in the presence of known toxic agents.

Contraindications: History of sensitivity or severe intolerance to aspirin or meprobamate.

Composition: 150 mg. meprobamate, 75 mg. ethoheptazine citrate and 250 mg. aspirin per tablet.

Wyeth Laboratories Philadelphia, Pa.

Weighing on his mind, too

When pain evokes anxiety and tension, thereby heightening patient discomfort, a simple analgesic may only touch on part of the problem.

This single-prescription, nonnarcotic product, however, usually provides effective analgesia *and* helps put the patient's mind at ease.

now Novestrol™ (ethinyl estradiol U.S.P.)

estrogen replacement therapy

for the menopausal syndrome and female hypogonadism. Novestrol, a pure synthetic estrogen derivative, is related to estradiol which is the primary hormone of the ovarian follicle. It is effective orally and has all the actions of naturally occurring estrogen.

Ethinyl estradiol is the most active estrogen known. In addition to its high potency, Novestrol offers patients the advantages of minimal side effects, low cost, and convenience. Usually only a single daily dose is necessary.

Description: Each green, sugar-coated tablet contains 0.02 mg. of ethinyl estradiol U.S.P., a pure synthetic estrogen derivative, the most active estrogen known.

Indications: Menopausal syndrome and female hypogonadism.

Contraindications: Patients with tumors which estrogen might stimulate.

Precautions: Examine patients for mammary or reproductive system neoplasm. Give with great care, if at all, to patients who have precancerous lesions or family history of cancer.

Prolonged administration or high doses may produce anterior pituitary suppression. Endometrial bleeding can usually be avoided by cyclic administration at lowest effective dose and addition of progesterone during last half of cycle. Endometrial hyperplasia may develop in spite of cyclic therapy.

Side Effects: Occasional gastrointestinal disturbances, headache and vertigo. These usually disappear following proper dosage reduction.

Dosage and Administration: Determine minimum effective dose and maintain only as long as necessary.

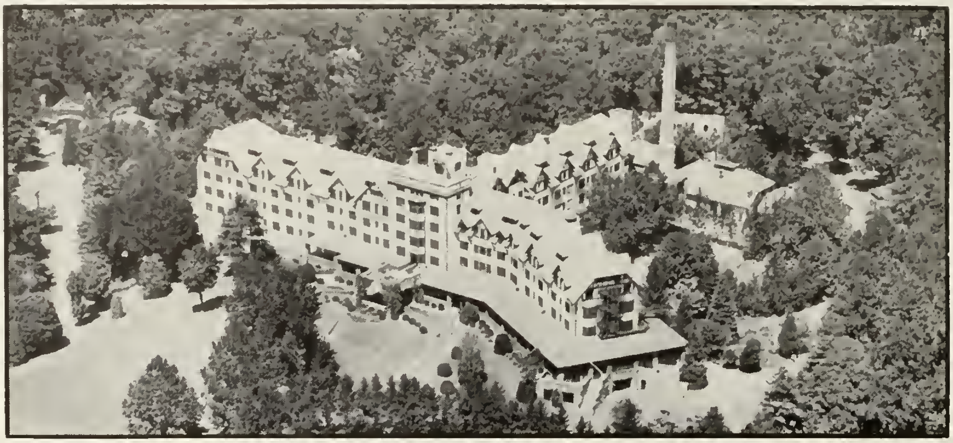
Menopausal Syndrome: One or two tablets (0.02 or 0.04 mg.) daily. Omit therapy one week each month. Repeat cyclic therapy until satisfactory response is obtained. Advise patient that vaginal bleeding may occur.

Female Hypogonadism: Two tablets (0.04 mg.) one to three times daily for two weeks followed by progesterone for two weeks. Continue cyclic therapy for 3-6 months; then withdraw therapy to determine if normal cycle will be instituted. Additional cyclic therapy may be required in some patients.

RORER

WILLIAM H. RORER, INC. Fort Washington, Pa.

APPALACHIAN HALL
ESTABLISHED — 1916
ASHEVILLE NORTH CAROLINA



An Institution for the diagnosis and treatment of Psychiatric and Neurological illnesses, rest, convalescence, drug and alcohol habituation.

Insulin Coma, Electroshock and Psychotherapy are employed. The Institution is equipped with complete laboratory facilities including electroencephalography and X-Ray.

Appalachian Hall is located in Asheville, North Carolina, a resort town, which justly claims an all around climate for health and comfort. There are ample facilities for classification of patients, rooms single or en suite.

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APPALACHIAN HALL, ASHEVILLE, N. C.

HIGHLAND HOSPITAL
ASHEVILLE, NORTH CAROLINA
Founded 1904

A Division Of The Department Of Psychiatry Of Duke University
Accredited by the Joint Commission on Accreditation and Certified for Medicare

Complete facilities for evaluation of and intensive treatment of psychiatric patients, including individual psychotherapy, group therapy, psychodrama, electro-convulsive therapy, Indoklon convulsive therapy, drugs, social service work with families, family therapy, and an extensive and well organized activities program, including occupational therapy, art therapy, athletic activities and games, recreational activities and outings. The treatment program of each patient is carefully supervised in order that the therapeutic needs of each patient may be realized.

Complete modern facilities with 85 acres of landscaped and wooded grounds in the City of Asheville.

Brochures and information on financial arrangements available
Contact: Mrs. Elizabeth Harkins, ACSW, Coordinator of Admissions
or
Charles W. Neville, Jr., M. D.
Assistant Professor of Psychiatry and Medical Director
Area Code 704 - 253-2761

“Take a laxative” is a harsh sentence

Although there are more than 60 ethical laxatives available for the constipated patient, many, unfortunately, do not really produce an effect much like a normal bowel movement. Instead they whip the bowel, torment it and leave it irritated, inflamed and exhausted.
On the other hand, Dulcolax provides a nearly normal movement. Through its unique contact action, it induces the kind of natural contraction waves of the colon necessary for gentle, complete, comfortable bowel movements.
For your next constipated patient, try Dulcolax—the laxative with the gentle touch.

Dulcolax, brand of bisacodyl tablets (5 mg.)

Under license from
Boehringer Ingelheim
G.m.b.H.

Geigy Pharmaceuticals
Division of
Geigy Chemical Corporation
Ardsley, New York

Dulcolax®
a gentle persuasion

Geigy

480

Against these three major pathogens…

Pneumococci
Penicillin-Sensitive Staphylococci
Beta-Hemolytic Streptococci

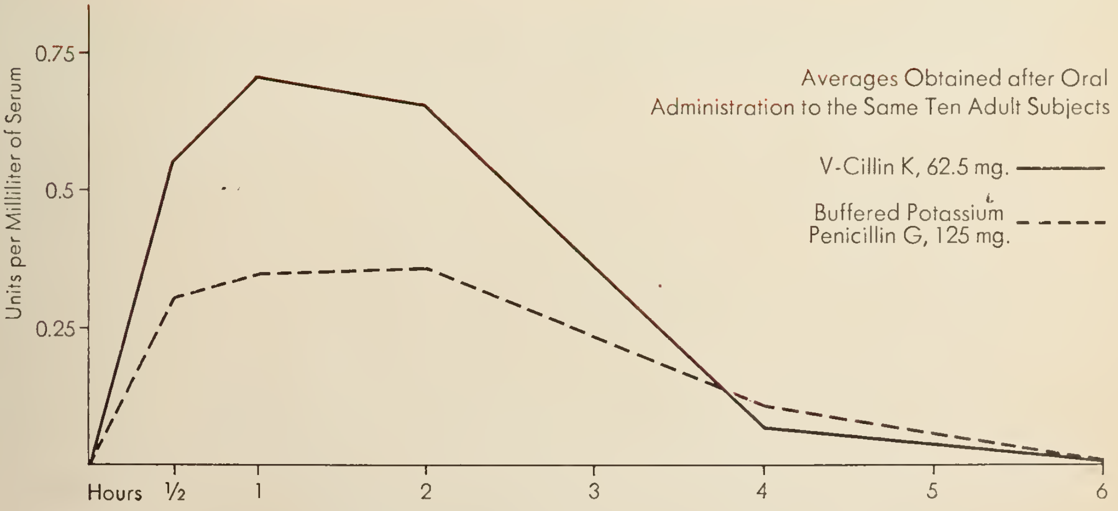
V-Cillin K® provides unexcelled oral antibacterial activity

because it combines a high degree of in-vitro activity...

Antibiotic	Staph.Aureus (Penicillin-Sensitive) MIC (mcg /ml.)		Streptococcus, Group A MIC (mcg./ml.)		Diplococcus Pneumoniae MIC (mcg./ml.)	
	Median	Range	Median	Range	Median	Range
Penicillin V	0.02	0.02-0.04	0.02	0.003-0.4	0.01	0.005-0.2
Penicillin G	0.02	0.005-1.6	0.005	0.002-0.2	0.02	0.01-0.1
Methicillin	1.6	0.4-6.3	0.2	0.1-0.4	0.2	0.1-1.6
Oxacillin	0.4	0.1-3.1	0.04	0.02-0.4	0.1	0.04-0.8
Cloxacillin	0.2	0.2-0.8	0.1	0.1-0.8	—	—
Nafcillin	0.4	0.2-0.8	0.04	0.02-0.1	0.02	0.02-0.2
Ampicillin	0.2	0.1-0.8	0.02	0.01-0.04	0.02	0.01-0.04

Adapted from Klein, J. O., and Finland, M. New Englond J. Med ,269 1019, 1963.

with high blood levels, even in the presence of food



Adapted from Griffith, R. S , and Black, H. R.: Current Ther. Res., 6 253, 1964.

V-Cillin K® Lilly

700157

Potassium Phenoxymethyl Penicillin

(See next page for prescribing information.)

New 500 mg. tablets...a more convenient way to give high doses

100
TABLETS No. 1832
V-CILLIN K
POTASSIUM PHENOXYMETHYL PENICILLIN TABLETS, U.S.P.
500 mg. (800,000 Units)
CAUTION—Federal (U.S.A.) law prohibits dispensing without prescription
DATED
XS 2440 AMX
Lilly
ELI LILLY AND COMPANY, INDIANAPOLIS, U.S.A.

Description: V-Cillin K is the potassium salt of V-Cillin® (phenoxymethyl penicillin, Lilly). This chemically improved form combines acid stability with immediate solubility and rapid absorption. Higher serum levels are obtained more rapidly with this penicillin thon with equal orol doses of penicillin G. The higher serum levels ond acid stability of V-Cillin K make it a more dependable penicillin for oral use.

V-Cillin K, Pediotric, is an oral solution of clinicolly proved V-Cillin K in teospoon dosage form. When mixed as directed, each 5 cc. (opproximately one teospoonful) will contain 125 mg. (200,000 units) phenoxymethyl penicillin as the potassium salt.

Indications: V-Cillin K has been shown to be effective in the treatment of streptococcus, pneumococcus, and gonococcus infections os well as infections caused by sensitive strains of staphylococci. It may be used for the prophylaxis of streptococcus infections in potients with o history of rheumatic fever and for the prevention of bacterial endocarditis after tonsillectomy and tooth extraction in those patients with a history of rheumatic fever or congenital heort disease.

Contraindication: V-Cillin K should not be administered to a patient with a history of penicillin hypersensitivity.

Precautions: V-Cillin K should be used cautiously, if at all, in a patient with a strongly positive history of allergy. Reactions occur more frequently in individuals with bronchial asthma or other allergies or in those who have previously demonstrated sensitivity to penicillin. hypersensitivity reactions occur, the drug should be discontinued.

Adverse Reactions: Although serious allergic reactions are mu less common with administration of oral penicillin than with intramusc lar forms, skin rash, symptoms resembling those of serum sickness, other manifestotions of penicillin allergy may occur. When penicilli administered, measures for treating anaphylaxis should be read available. Those include epinephrine, oxygen, and pressor drugs f relief of immediate allergic manifestations as well as antihistamin and corticosteroids for delayed effects.

The use of antimicrobial agents may be associated with the ov growth of ontibiotic-resistant organisms; in such a case, antibiotic a ministration should be stopped and appropriate measures taken.

Administration and Dosage: For Tablets V-Cillin K and for V-Ci K, Pediatric, the usual dosage ranges from 125 mg (200,000 unit three times a doy to 500 mg. (800,000 units) every four hours. For fants, the daily dosage moy be 50 mg. per Kg. of body weight divid into three doses.

Beta-hemolytic streptococcus infections without associoted bac remia may be treated with 200,000 to 400,000 units three times a do Therapy should be continued for a minimum of ten days to prevent d velopment of rheumatic fever and/or other serious complications. Do age for routine streptococcus prophylaxis in patients with a history rheumatic fever or congenital heort disease may be 200,000 units on or twice daily. When such patients undergo tonsillectomy, tooth extra tion, or other minor surgery, the prophylactic dose should be 500,0 units every six hours given two days prior to surgery ond for two da postoperatively. If orol medication is not feasible on the day of su gery, parenteral therapy should be considered. Mild to moderat severe pneumococcus pneumonia has been treoted effectively w 250 mg. every six hours.

In staphylococcus infections, 400,000 units or more should be giv every six to eight hours in conjunction with indicoted surgical proc dures.

For gonorrhea in males, 500 mg. (800,000 units) every six hours f three doses may be employed; in females, 500 mg. every four hours f six doses are recommended. Patients with a suspected lesion of syph should have a dark-field examination before receiving penicillin a monthly serologic tests for a minimum of three months.

How Supplied: Tablets V-Cillin K, U.S.P., 125 mg. (200,000 units), bottles of 50 and 100, 250 mg. (400,000 units), and 500 mg. (800,0 units) in bottles of 24 ond 100.

V-Cillin K, Pediatric, for Oral Solution, 125 mg. (200,000 units) p 5 cc. of solution, in 40, 80, and 150-cc.-size packages.

Additional informotion ovailoble to physicions upon request. Eli Lilly and Compony, Indionopolis, Indiona 46206.

Lilly

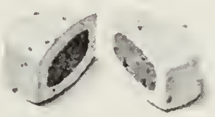
700

To "catch" your patient's cold so others won't...

the speckled tablet with a core of difference

SUSTAINED-ACTION

Naldecon®



Each tablet contains:	Outer layer (immediate action)	Core (sustained action)
phenylpropanolamine HCl	20 mg	20 mg
phenylephrine HCl	5 mg	5 mg
phenyltoloxamine citrate	7.5 mg	7.5 mg
chlorpheniramine maleate	2.5 mg	2.5 mg

Each teaspoonful (5 ml) of syrup contains the equivalent of one-half tablet

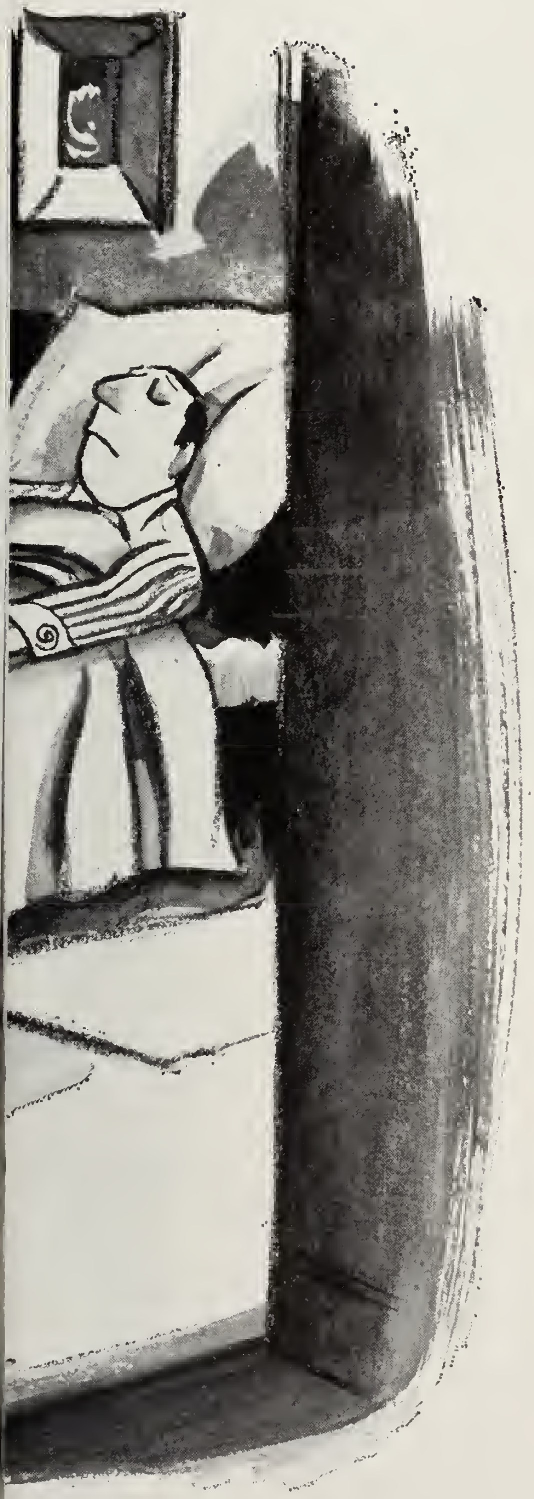
For rapid and sustained symptomatic relief of colds and minor upper respiratory infections.

Prescribing Information: For complete information consult Official Package Circular. **Effectiveness:** Clinical experience has shown this formulation to be effective in relieving the symptoms of nasal congestion associated with pollen allergy or minor upper respiratory infections (common cold, nasopharyngitis, acute and chronic sinusitis). **Precautions:** Do not drive or operate machinery while taking Naldecon. Exceed dose or give to children under 6 years old only on advice of physician. **Contraindications:** Severe hypertension, hyperthyroidism, serious organic heart disease or severe diabetes mellitus. **Usual Dose:** Adults: One tablet morning, midafternoon and evening. Naldecon tablets are scored and may be broken for fractional dosage, without loss of sustained-action effect. **Supplied:** Bottles of 50 and 500 tablets. Syrup, 1 pt. bottle.

BRISTOL

Bristol Laboratories
Division of Bristol-Myers Company
Syracuse, New York 13201

"George wants to know if it's okay to take his cold medicine now, Doctor, instead of seven o'clock?"



The long-continued action of Novahistine LP should help you both get a good night's sleep. Two tablets in the morning and two in the evening will usually provide round-the-clock relief by helping clear congested air passages for freer breathing. Novahistine LP also helps restore normal mucus secretion and ciliary activity—normal physiologic defenses against infection of the respiratory tract. Use cautiously in individuals with severe hypertension, diabetes mellitus, hyperthyroidism or urinary retention. Caution ambulatory patients that drowsiness may result. Each Novahistine LP tablet contains: phenylephrine hydrochloride, 25 mg., and chlorpheniramine maleate, 4 mg.

NOVAHISTINE® LP

DOW **PITMAN-MOORE** Division of The Dow Chemical Company, Indianapolis

Perhaps there have been times when you wanted to prescribe erythromycin and triple sulfas for little patients. Now you can—with a choice of two new fine-tasting pediatric forms.

New–Two Pediatric Forms of Erythromycin and Triple Sulfas

150 ml. No. 6372
For Oral Suspension
ERYTHROCIN® Sulfas
Granules
ERYTHROMYCIN ETHYL SUCCINATE TRISULFAPYRIMIDINES FOR ORAL SUSPENSION
ERYTHROCIN® Sulfas
Granules
50 Tablets No. 6380
(Grooved)
ERYTHROCIN® Sulfas
Chewable
ERYTHROMYCIN ETHYL SUCCINATE TRISULFAPYRIMIDINES CHEWABLE TABLETS
Caution: Federal (U.S.A.) law prohibits dispensing without prescription

ERYTHROCIN®-SULFAS Chewable

(Erythromycin ethyl succinate-trisulfapyrimidines chewable tablet)

In clinical trials[1,2], this orange-flavored tablet was given to 55 patients, aged four months to 18 years.

Diagnoses (multiple in some cases) represented a cross section of bacterial infections commonly seen in pediatric office practice.

Therapy was given from three to 12 days, with an average of six days.

Of the 55 patients, 30 were reported cured within 72 hours, while 22 showed partial recovery within the same time, and subsequent clinical cure.

A clinical cure rate of 94.5%

ERYTHROCIN®-SULFAS Granules

(Erythromycin ethyl succinate-trisulfapyrimidines granules for oral suspension)

87 patients were treated[1,2]—all children, ages four months to 15 years.

The diagnoses were multiple in some cases and were chiefly bacterial infections of the respiratory tract.

Dosage was maintained from three to 10 days; average treatment was five days. All of the ill children accepted the orange-flavored suspension favorably.

53 were clinically cured within 72 hours, while 32 showed partial relief within the same time, and subsequent clinical cure.

701358

A clinical cure rate of 97.7%

1. Case Reports on File, Dept. Clin. Development, Abbott Laboratories.
2. Polley, R.F.L., Use of Erythromycin-Sulfas in Office Practice, Western Med., 7:177, July, 1966.

ABBOTT

Brief Summary on next page

ERYTHROCIN®-SULFAS
Brief Summary

Contraindications: Known sensitivity to erythromycin or sulfonamides. Because of the possibility of kernicterus with sulfonamides, do not use in pregnancy at term, premature or newborn infants.

Warnings: As with other forms of sulfonamide therapy, carefully evaluate patients with liver or kidney damage, urinary obstruction, or blood dyscrasia. Deaths have been reported from hypersensitivity reactions and blood dyscrasias following use of sulfonamides. Perform blood counts and liver and kidney function tests if used repeatedly at close intervals or for long periods.

Precautions, Side Effects: Occasionally mild abdominal discomfort, nausea or vomiting may occur with erythromycin, generally controlled by reduction of dosage. Mild allergic reactions (such as urticaria and other skin rashes) may occur. Serious allergic reactions have been extremely infrequent. Use sulfonamides with caution in patients with a history of allergy. Assure adequate fluid intake to prevent crystalluria and institute alkali therapy if indicated. If overgrowth of nonsusceptible organisms occurs, withdraw the drug and institute appropriate treatment. If a patient should show signs of hypersensitivity, appropriate countermeasures (e.g. epinephrine, steriods, etc.) should be administered and the drug withdrawn.

Adverse Reactions: Sulfonamide therapy may be associated with headache, nausea, vomiting, urticaria, diarrhea, hepatitis, pancreatitis, blood dyscrasias, neuropathy, drug fever, skin rash, injection of the conjunctiva and sclera, petechiae, purpura, hematuria and crystalluria.

Side effects due to erythromycin are infrequent, but occasional abdominal discomfort, nausea, or vomiting, urticaria and other skin rashes may occur.

Supplied: The Granules for Oral Suspension come in bottles of 60 ml. and 150 ml. The Chewable tablets are in bottles of 50. Each 5-ml. teaspoonful of reconstituted Granules or each Chewable tablet provides erythromycin ethyl succinate equivalent to 125 mg. of erythromycin activity and 167 mg. of each of sulfadiazine, sulfamerazine and sulfamethazine.

701358

Tandearil®
oxyphenbutazone

Therapeutic Effects: Tandearil is a nonhormonal compound which may rapidly resolve inflammation and help restore normal joint function. Its action does not affect pituitary-adrenal function or impair immune responses. Its value in osteoarthritis is especially noteworthy because this disorder responds inconsistently to steroids and is often resistant to salicylates. Further, indomethacin is limited only to osteoarthritis of the hip, whereas oxyphenbutazone is effective in all forms of the disease.

Contraindications: Edema; danger of cardiac decompensation; history or symptoms of peptic ulcer; renal, hepatic or cardiac damage; history of drug allergy; history of blood dyscrasia. The drug should not be given when the patient is senile or when other potent drugs are given concurrently.

Warning: If coumarin-type anticoagulants are given simultaneously, watch for excessive increase in prothrombin time. Pyrazole compounds may potentiate the pharmacologic action of sulfonylurea, sulfonamide-type agents and insulin. Carefully observe patients receiving such therapy. Use with great caution in the first trimester of pregnancy.

Precautions: Obtain a detailed history and a complete physical and laboratory examination, including a blood count. The patient should be closely supervised and should be warned to report immediately fever, sore throat, or mouth lesions (symptoms of blood dyscrasia); sudden weight gain (water retention); skin reactions; black or tarry stools or other evidence of intestinal hemorrhage. Make regular blood counts. Discontinue the drug and institute countermeasures if the white count changes significantly, granulocytes decrease, or immature forms appear. Use greater care in the elderly and in hypertensives.

Adverse Reactions: The most common are nausea, edema and drug rash. The drug has been associated with peptic ulcer and may reactivate a latent peptic ulcer. Infrequently, agranulocytosis, or a generalized allergic reaction may occur and require withdrawal of medication. Stomatitis, salivary gland enlargement, vomiting, vertigo and languor may occur. Leukemia and leukemoid reactions have been reported but cannot definitely be attributed to the drug. Thrombocytopenic purpura and aplastic anemia may occur. Confusional states, agitation, headache, blurred vision, optic neuritis and transient hearing loss have been reported, as have hyperglycemia, hepatitis, jaundice, and several cases of anuria and hematuria. With long-term use, reversible thyroid hyperplasia may occur infrequently. Moderate lowering of the red cell count due to hemodilution may occur.

Dosage in Osteoarthritis: The initial daily dosage in adults is 300-600 mg. in divided daily doses. When improvement occurs, dosage should be decreased to the minimum effective level; this should not exceed 400 mg. daily, and is often achieved with only 100-200 mg. daily.

For complete details, please refer to full prescribing information. 6562-VI(B)R

Availability: Tablets of 100 mg.

Geigy Pharmaceuticals
Division of Geigy Chemical Corporation
Ardsley, New York

Geigy

Tandearil®
oxyphenbutazone

helps osteoarthritic joints move again

	3 out of 4 osteoarthritics completely or markedly improved
Sperling, I.L.: 3 Years' Experience with Oxyphenbutazone in the Treatment of Rheumatic Disorders, Applied Therapeutics 6:117, 1964.	76.9% of 407 patients
Watts, T.W., Jr.: Treatment of Rheumatoid Disorders with Oxyphenbutazone, Clin. Med. 73:65, 1966.	84.6% of 39 patients

Please see adjoining page for brief prescribing summary

TA-4919 PC

Night Leg Cramps...Frequent Bedfellow
In Diabetes,[1] Arthritis,[2] and Peripheral Vascular Disorders[2]

now...specific therapy for night leg cramps

QUINAMM™

Consistently effective, QUINAMM provided complete relief in 94% of 200 patients studied, many of whom were severe cases refractory to other medication.[3] Your prescription for one tablet at bedtime often controls painful night cramps with the initial dose . . . helps restore restful sleep.

QUINAMM Prescribing Information: Composition: Each white, beveled, compressed tablet contains: Quinine Sulfate 4 grains (250 mg.) and Aminaphylline 3 grains (200 mg.). **Precautions:** Aminaphylline may produce intestinal cramps in some instances, and quinine may produce symptoms of cinchonism, such as tinnitus, dizziness, and gastrointestinal disturbance. Discontinue use if ringing in the ears, deafness, skin rash, or visual disturbances occur. **Contraindication:** QUINAMM is contraindicated in pregnancy because of its quinine content. **Dosage:** One tablet upon retiring. Where necessary, dosage may be increased to one tablet following the evening meal and one tablet upon retiring. **Supplied:** Bottles of 100 and 500 tablets. **Caution:** Federal law prohibits dispensing without prescription.

References: 1. Shumon, C.: Am. J. Med. Sci., 225:54, 1953. 2. Perchuk, E., et al.: Angialogy, 12:102, 1961. 3. Rawls, W., et al.: Med. Times, 87:818, 1959.

WALKER Laboratories Division of Richardson-Merrell Inc., Mount Vernon, New York 10551

The full ¼ grain of phenobarb in the formula
takes the nervous edge off the pain
...helps bring out the best in codeine

Phenaphen® with Codeine

the only leading compound analgesic that calms instead of caffeinates

Each capsule contains:

Phenobarbital (¼ gr.) .... 16.2 mg.
(Warning: may be habit forming)
Aspirin (2½ gr.) ....162.0 mg.
Phenacetin (3 gr.) ....194.0 mg.
Hyoscyamine sulfate ....0.031 mg.
Codeine phosphate..............¼ gr. (No. 2),
½ gr. (No. 3), 1 gr. (No. 4)
(Warning: may be habit forming)

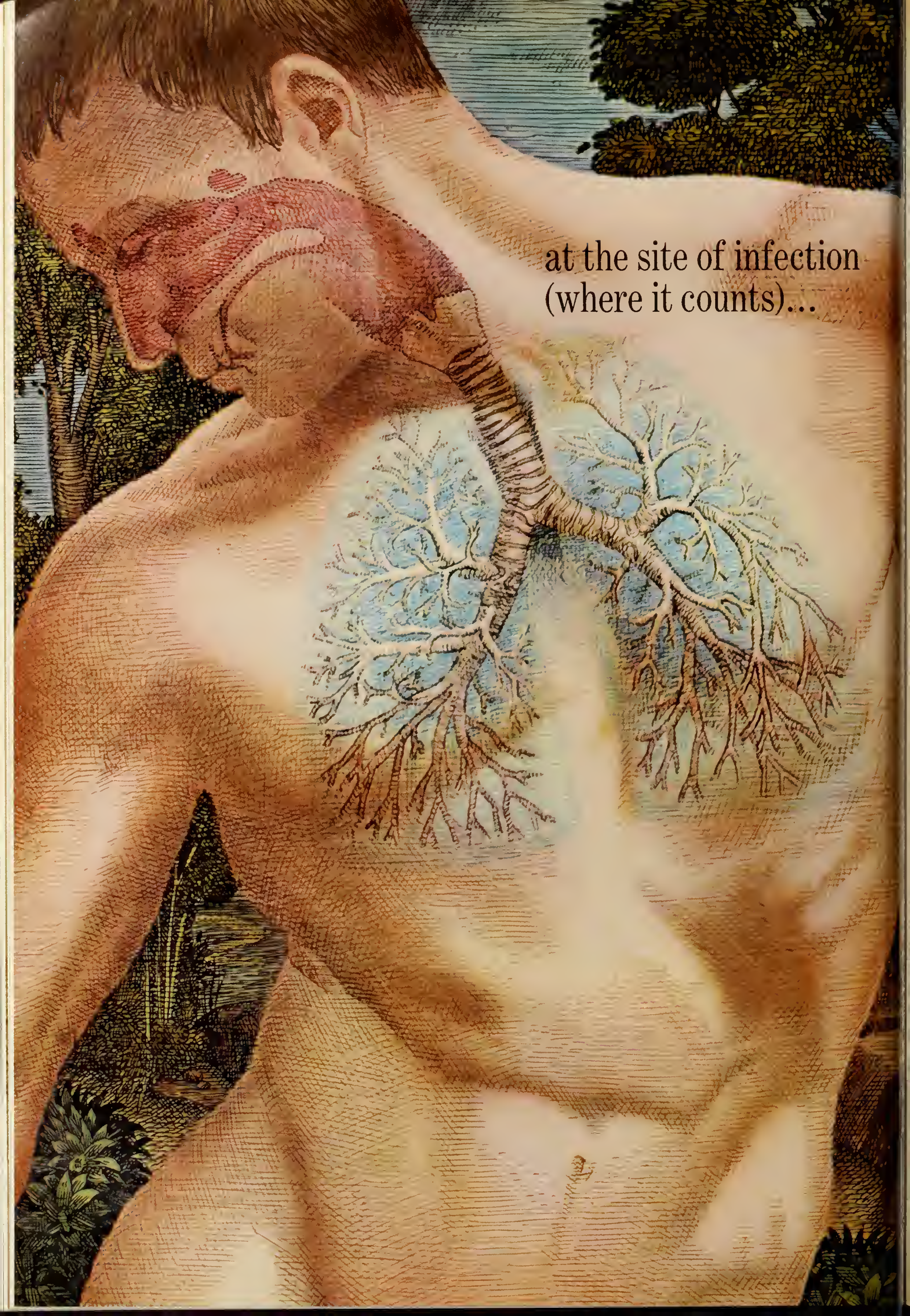
Contraindications: Hypersensitivity to any ingredient.

Precautions: As with all phenacetin-containing products, avoid excessive or prolonged use.

Side Effects: Side effects are uncommon—nausea, constipation, and drowsiness have been reported.

A·H·ROBINS

A. H. ROBINS CO., INC., Richmond, Va. 23220


at the site of infection
(where it counts)...

Ilosone® provides more antibacterial activity than any other oral erythromycin

Acid stable, better absorbed... Ilosone produces faster, higher, more prolonged blood levels, even in the presence of food[1-3]

Because it is the most active form of oral erythromycin, Ilosone can help assure consistently greater antibacterial activity at the site of infection. Ilosone produces peak antibacterial blood levels two to four times those of other erythromycin preparations.[1,2] Not only are these levels attained earlier, but they are maintained for much longer periods. Even the presence of food does not seem to affect the activity of Ilosone.[1,3]

In the treatment of patients with bacterial infections susceptible to erythromycin, Ilosone has compiled an excellent therapeutic record. Since it exerts its greatest activity against gram-positive organisms, it is particularly useful in common respiratory and soft-tissue bacterial infections. Ilosone kills—not merely inhibits—streptococci, pneumococci, and more strains of staphylococci than any other macrolide antibiotic. This bactericidal action, coupled with the high antibacterial levels attained, makes Ilosone especially valuable in patients with low host resistance, such as infants, debilitated individuals, and diabetics.

Ilosone has shown no cross-resistance with penicillin and may be effective against organisms that have become resistant to that agent. Despite its high antibacterial activity, Ilosone has demonstrated a low incidence of side reactions. Blood dyscrasias, ototoxicity, and tooth staining have not been observed. Infrequent cases of drug idiosyncrasy, manifested by a cholestatic jaundice, have occurred, but there have been no known definite residual effects.

700121

Ilosone® Lilly

Erythromycin Estolate

(See next page for prescribing information.)

Ilosone®/the most active oral form of erythromycin

Description: Ilosone is the most active form of oral erythromycin that has been developed. Because it is stable in acid, well absorbed, and excreted in lesser amounts in the bile, it provides faster, higher, and longer-lasting levels of antibacterial activity (ABA) in the serum, even when taken with food, than do comparable doses of erythromycin.

Indications: Ilosone is indicated in infections caused by microorganisms sensitive to its action (especially staphylococci, hemolytic streptococci, and pneumococci). The drug is therefore useful in a high proportion of bacterial diseases encountered in clinical practice and particularly in the treatment of bacterial infections of the upper and lower respiratory tract and soft tissues.

In the treatment of acute bacterial pharyngitis and tonsillitis, this antibiotic has promptly eradicated the bacteria (streptococci) and has produced a parallel prompt clinical improvement. There have been no group A beta-hemolytic streptococci resistant to this preparation. In beta-hemolytic streptococcus infections, treatment should be maintained for ten days to prevent the development of rheumatic fever or glomerulonephritis.

Erythromycin estolate has proved to be very effective in pneumococcus pneumonia and in acute bronchitis with pneumococci on culture. Bronchopneumonia and otitis media in children have responded well to its use.

The antibiotic has been used very successfully in staphylococcus infections. Good therapeutic results have been obtained in soft-tissue infections, abscesses, cellulitis, carbuncles, wound infections, and furunculosis.

In serious staphylococcus infections, erythromycin preparations should be used only in combination therapy with other antimicrobial agents. As is the case with any treatment regimen used in these severe conditions, surgical procedures should be performed when indicated, and large dosages of the antimicrobial agents should be employed. In this fashion, Ilosone has been effective in staphylococcus pneumonia, osteomyelitis, septicemia, empyema, and meningitis.

Multiple 500-mg. doses of the drug have been useful in gonorrhea and syphilis. Since penicillin is the drug of choice for the treatment of syphilis and gonorrhea, erythromycin estolate should be employed for these infections only in patients with a history of penicillin allergy. Also, other infections due to susceptible bacteria in patients known to be hypersensitive to penicillin or other antibiotics may be considered for treatment with Ilosone.

Contraindications: **Ilosone is contraindicated in patients with a known history of sensitivity to this drug and in those with preexisting liver disease or dysfunction.**

Side-Effects: Data obtained from seven years' use of propionyl erythromycin ester and erythromycin estolate (Ilosone) indicate that hepatic dysfunction with or without clinical jaundice may occur during or following courses of therapy with the drug.

Changes in liver function tests in such cases have been indicative of intrahepatic cholestasis. The symptoms appear to be the result of a form of sensitization. The initial symptoms have appeared in some cases after a few days of treatment but generally have followed one or two weeks of continuous therapy or several courses of the drug. Symptoms reappear promptly if the drug is readministered to sensitive patients, usually within forty-eight hours. Eosinophilia was noted in peripheral blood counts. The findings readily subsided without apparent residual effects when treatment was discontinued. Recovery was delayed in one reported instance. The physician indicated in this case that either drug-induced jaundice or viral hepatitis may have been responsible for the findings.

In one clinical study involving ninety-three patients treated with the antibiotic, three cases of jaundice were observed and an additional eleven cases developed some changes in liver function tests. Three of the patients had abnormal liver function tests a second time on readministration of the drug.

Even though it is assumed that not all cases of jaundice have been reported, it seems clear that the number is small compared with the amount of drug that has been used. Reported cases have included persons in whom there had been administered other drugs known to be associated at times with hepatic side-effects and cases in which the presence of viral hepatitis or other disease may have been responsible for the findings. In some of the cases, associated gastro-intestinal symptoms simulated the colic of biliary tract disease. In other instances, clinical symptoms and results of liver function tests resembled findings in extrahepatic obstructive jaundice. It appears that the occurrence of jaundice after administration of Ilosone is infrequent, but further investigations are being made to estimate its incidence more accurately.

In those cases mentioned above in which jaundice appeared to be definitely related to use of the drug, laboratory findings were characterized by increased direct-reacting bilirubin, elevated alkaline phosphatase levels, negative or weakly positive cephalin flocculation and thymol turbidity tests, elevated serum glutamic oxalacetic transaminase levels, peripheral eosinophilia, and normal cholecystograms.

Individual idiosyncrasy seems evident since jaundice has not been reported in other patients taking prolonged courses of the medication. Patients with chronic infection have been given 1 to 2 Gm. of the drug daily for periods of two to six months, and patients with rheumatic fever have taken prophylactic doses of 0.5 Gm. daily for two years without difficulty. In one group of 144 patients who received the drug daily for two years, no jaundice was noted. It was of interest that members of six of these patients' families, who were not taking the drug, had episodes of jaundice during the study period.

Transaminase and serum alkaline phosphatase levels were determined in a group of fifty-four adults and children who took 250 mg. of Ilosone daily for an average of sixteen months as rheumatic fever prophylaxis. The results were compared with those of a similar group of forty-four patients who received penicillin. There were no cases of jaundice in either group. Elevation of SGPT and serum alkaline phosphatase levels during the course of treatment was observed in one patient treated with Ilosone and in two patients treated with penicillin. Seven other patients in the group receiving Ilosone and four others in the penicillin group showed elevations in one of the tests at some time during administration of the drugs.

Very satisfactory therapeutic results, without toxicity, were reported in 102 pediatric patients who received short-term (ten-day) courses of Ilosone in the treatment of streptococcus infections. Results of liver function tests in these patients were comparable to those in a similar control group who had received penicillin.

Gastro-intestinal disturbances not associated with hepatic effects are observed in a small proportion of individuals as a result of a local stimulating effect of the medication on the alimentary tract; however, the normal intestinal gram-negative bacterial flora is not appreciably altered by erythromycin drugs.

Although allergic manifestations are uncommon with the use of erythromycin, there have been occasional reports of urticaria, skin eruptions, and, on rare occasions, anaphylaxis.

Administration and Dosage: Ilosone is administered orally.
Ilosone Pulvules®
Ilosone Chewable Tablets
Ilosone Drops
Ilosone, 125, for Oral Suspension

For infants and for children under twenty-five pounds of body weight, the usual dosage is 5 mg. per pound every six hours; for children twenty-five to fifty pounds, 125 mg. every six hours. (Tablets Ilosone Chewable should be chewed or crushed and swallowed with water.)

For adults and for children over fifty pounds, the usual dosage of Ilosone is 250 mg. every six hours.

For severe infections, these dosages may be doubled.

When larger doses are indicated, parenteral erythromycin therapy should be considered.

In the treatment of syphilis, the recommended total dosage is 20 to 30 Gm. given in divided doses for a period of ten to fifteen days. Close follow-up of the patient is necessary since erythromycin drugs have not had adequate evaluation in all stages of syphilis. Examinations of spinal fluid are recommended as part of the follow-up therapy.

For gonorrhea, 500 mg. four times a day for four days are recommended. In the treatment of gonorrhea, patients with a suspected lesion of syphilis should have a dark-field examination before receiving antibiotics, and monthly serologic tests should be made for a period of three months.

How Supplied: Pulvules Ilosone, Capsules, N.F., 125 and 250 mg. (equivalent to base), in bottles of 24 and 100.

Tablets Ilosone Chewable, N.F., 125 mg. (equivalent to base), in bottles of 50.

Ilosone Drops, 5 mg. (equivalent to base) per drop, in 10-cc.-size packages, with dropper calibrated at 25 and 50 mg.

Ilosone, 125, for Oral Suspension, N.F., 125 mg. (equivalent to base) per 5-cc. teaspoonful, in 60 and 150-cc.-size packages.

References: 1. Griffith, R. S., and Black, H. R.: Am. J. M. Sc., *247*:69, 1964. 2. Griffith, R. S., and Black, H. R.: Antibiotics & Chemother., *12*:398, 1962. 3. Hirsch, H. A., Pryles, C. V., and Finland, M.: Am. J. M. Sc., *239*:198, 1960.

Additional information available to physicians upon request.
Eli Lilly and Company, Indianapolis, Indiana 46206.

Lilly

700121

new from Ames 5 basic uro-analytical facts in 30 seconds

Labstix®
BRAND REAGENT STRIPS

...broadest urine screening possible from a single reagent strip

Urine test results with Labstix Reagent Strips can represent significant guides to differential diagnosis or therapy in many conditions. An unexpected "positive" may enable you to detect hidden pathology—long before more recognizable symptoms become evident. Negative results, which permit you to rule out abnormalities in a broad clinical range, can serve as baseline values for reference in future examinations. The 5 colorimetric test areas encompassed on Labstix Reagent Strips are:

pH—values are read numerically in the essential range of pH 5 to pH 9.

Protein—results are read either in the "plus" system or in mg. % in amounts approximating "trace," 30, 100, 300, and over 1000 mg. %.

Glucose—provides a "Yes-or-No" answer for urine "sugar spill."

Ketones—detects ketone bodies in urine—**both** acetoacetic acid and acetone. Reacts with as little as 5 to 10 mg. % of acetoacetic acid.

Occult Blood—specific test for intact red cells, hemoglobin or myoglobin. Results are read as negative, small, moderate or large amounts.

Now a Clear Reagent Strip of Firm Construction

...facilitates handling during testing procedure. Excellent color contrast made possible by the clear plastic strip, together with the clearly defined color charts provided, permits precise, reproducible colorimetric readings in all 5 test areas. A more definitive interpretation of uro-analytical facts is made possible.

Available: Labstix Reagent Strips, bottles of 100 (color charts are supplied with each bottle).

Ames Company, Inc., Elkhart, Indiana

AMES

08165

Wounds, abscess, cellulitis

...and the complications of staph.

Staph reliably controlled with specific therapy

A suitable dosage form for every staph situation

From time of birth, the child is exposed to a whole range of potential staph infections: wounds; secondarily infected dermatoses; primary lesions, such as deep impetigo (ecthyma), boils and felons; and more serious conditions such as osteomyelitis, staph pneumonia and staph meningitis.

Bactericidal

Hardly a staph organism can resist the bactericidal action of Prostaphlin® (sodium oxacillin), as shown by a 34-month *in vitro* study. Of all staph isolates tested, 99.5% were sensitive to oxacillin.[1]

Clinically Proven

There is a high correlation between these *in vitro* findings and clinical results. Of 610 patients treated with Prostaphlin (sodium oxacillin), 89.8% were reported cured or improved, including those with staph infections resistant to penicillin G.[2] And since resistance does not appear to develop *in vivo*, therapy with oxacillin can be extended when necessary.

Outstanding Safety Record

Besides being staph-specific and rapidly absorbed—Prostaphlin (sodium oxacillin) has established an outstanding record of safety during five years of widespread clinical use. Continuous high blood levels of oxacillin have not produced toxic effects on kidney function, assuring a significant margin of safety. However, as with all penicillins, the possibility of allergic response should be considered.

Capsules, Oral Suspension and Injectable

Prostaphlin (sodium oxacillin) is available in three flexible dosage forms to suit the age of the patient and severity of infection—an oral solution for pediatric use, capsules, and multi-dose vials for injection.

PRESCRIBING INFORMATION: For complete information, consult Official Package Circular. *Indications:* Infections caused by Staphylococci, particularly those due to penicillin G-resistant Staphylococci. *Contraindications:* A history of severe allergic reactions to penicillin. *Precautions:* Typical penicillin-allergic reactions may occur. Safety for use in pregnancy and premature infants is not established. Because of limited experience, use cautiously and evaluate organ system function frequently in neonates. Mycotic or bacterial superinfections may occur. Assess renal, hematopoietic and hepatic function intermittently during long-term therapy. *Adverse Reactions:* Skin rashes, pruritus, urticaria, eosinophilia, nausea, vomiting, diarrhea, fever and occasional anaphylaxis. Rare cases of reversible hepatocellular dysfunction have occurred. Moderate SGOT elevations have been noted. Thrombophlebitis has occurred occasionally during intravenous therapy and leukopenia was noted in two cases. *Usual Oral Dosage:* Adults: 500 mg. *q.* 4 or *q.* 6 *h.* Children: 50 mg./Kg./day. *Usual Parenteral Dosage:* Adults: 250-500 mg. *q.* 4 or *q.* 6 *h.* Children: 50 mg./Kg./day. Treat beta-hemolytic streptococcal infections for at least 10 days. Give oral drug 1 to 2 hours before meals. *Supplied:* Capsules—250 and 500 mg. in bottles of 48. Injectable—250 mg., 500 mg., and 1 Gm. dry filled vial for I.M./I.V. use. For Oral Solution—100 ml. bottle, 250 mg./5 ml. when reconstituted.

A.H.F.S. CATEGORY 8:12.16

References: 1. Abstracted from *Antibiotic Sensitivity of Staphylococci Studied from November 1962 through August 1965*, reported by Griffith, L.J., Staphylococcus Reference Laboratory, V.A. Hospital, Batavia, N.Y. 2. Data on file, Bristol Laboratories.

BRISTOL

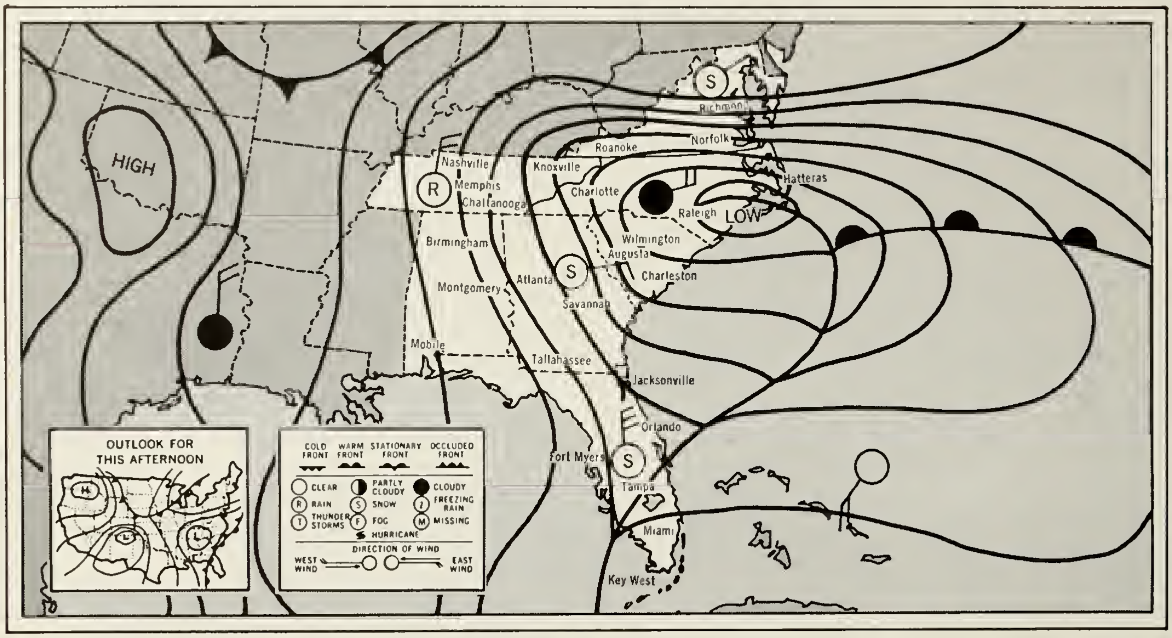
BRISTOL LABORATORIES/Division of Bristol-Myers Co., Syracuse, N.Y.

Whenever you suspect staph PROSTAPHLIN®

SODIUM OXACILLIN

REGIONAL WEATHER FORECAST

Record Low Temperatures and Heavy Rain Followed by Cough, Stuffed and Runny Noses and Aches and Pains.



Tussagesic breaks up coughs, quickly clears stuffed and runny noses and relieves aches and pains. Provide coverage of the tough cold for up to 24 hours with just a single timed-release tablet dosed morning, midafternoon and at bedtime.

each

Tussagesic®

timed-release tablet contains:

Triaminic®	50 mg.
(phenylpropanolamine hydrochloride 25 mg., pheniramine maleate 12.5 mg., pyrilamine maleate 12.5 mg.)	
Dextromethorphan hydrobromide	30 mg.
Terpin hydrate	180 mg.
Acetaminophen	325 mg.

Dosage: Adults—1 tablet, swallowed whole to preserve timed-release feature, in morning, midafternoon and at bedtime. *Side effects:* Occasional drowsiness, blurred vision, cardiac palpitations, flushing, dizziness, nervousness or gastrointestinal upsets. *Precautions:* The patient should be advised not to drive a car or operate dangerous machinery if drowsiness occurs. Use with caution in patients with hypertension, heart disease, diabetes or thyrotoxicosis.

DORSEY LABORATORIES • *a division of The Wander Company* • **LINCOLN, NEBRASKA**

UP TO 10–12 HOURS' CLEAR BREATHING ON ONE TABLET

Dimetapp® Extentabs®

(Dimetane® [brompheniramine maleate], 12 mg.; phenylephrine HCl, 15 mg.; phenylpropanolamine HCl, 15 mg.)

In sinusitis, colds, or U.R.I., Dimetapp lets congested patients breathe easy again. Each Extentab brings welcome relief all day or all night, usually without drowsiness or overstimulation. Its key to success? The Dimetapp formula—Dimetane (brompheniramine maleate), a potent antihistamine reported in one study to have elicited side effects as few as the placebo,* teamed with decongestants phenylephrine and phenylpropanolamine—in a dependable 10- to 12-hour form.

*Schiller, I. W., and Lowell, F. C.: New England J. Med. 261:478, 1959.

Contraindications: Patients hypersensitive to antihistamines. Not recommended for use during pregnancy.

Precautions: Until the patient's response has been determined, he should be cautioned against engaging in operations requiring alertness. Administer with care to patients with cardiac or peripheral vascular diseases or hypertension.

Side Effects: Hypersensitivity reactions including skin rashes, urticaria, hypotension and thrombocytopenia have been reported on rare occasions. Drowsiness, lassitude, nausea, giddiness, dryness of the mouth, mydriasis, increased irritability, or excitement may be encountered.

Dosage: 1 Extentab morning and evening, or as needed.

Supplied: Bottles of 100 and 500.

Also available: Dimetapp® Elixir for conventional *t.i.d.* or *q.i.d.* dosage. See package insert for further details.

A. H. ROBINS CO., INC.
RICHMOND, VIRGINIA 23220
A·H·ROBINS

℞

Don't delegate your authority in the choice of drugs

Generic prescribing allows a third party to choose for you. This does not of necessity ensure therapeutic effectiveness or lowest patient cost.

You can prescribe the quality and purity of ACHROMYCIN® V Tetracycline-Lederle at a cost that is within pennies-a-day of the low-priced generic tetracycline.

When you prescribe tetracycline, write ACHROMYCIN V. It's good policy, good medicine and good economy, all in one prescription. LEDERLE LABORATORIES, A Division of American Cyanamid Company, Pearl River, New York.

MAJOR
PRICE
REDUCTION
JAN. 15, 1967

ACHROMYCIN® V
TETRACYCLINE-LEDERLE

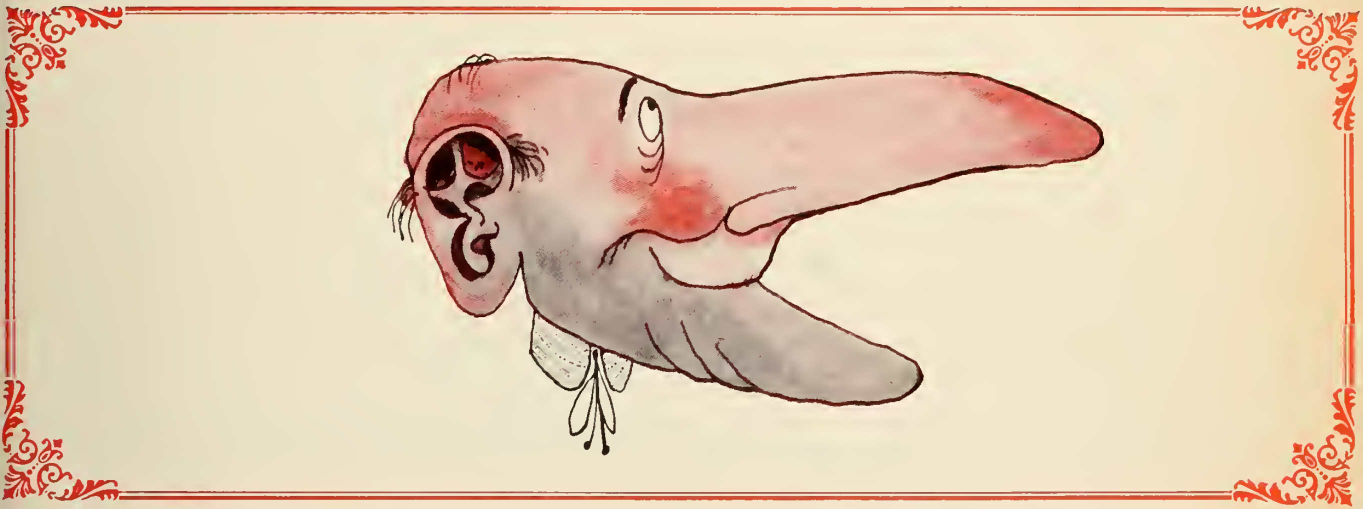
Lederle

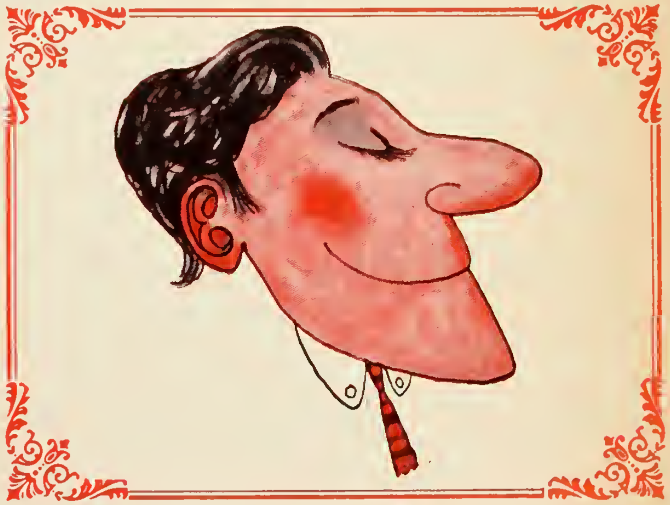
The Proof of Excellence is in the Performance

for noses of every description, one safe and sure prescription:

Otrivin®

(xylometazoline CIBA)
on Rx only





- **quickly relieves congested nose**
- **action is gentle, yet prolonged**
- **side effects are minimal**

INDICATION: Nasal congestion. CONTRAINDICATION: Do not use in patients sensitive to small doses of sympathomimetic substances. WARNINGS: Prolonged or excessive use may cause rebound congestion. Use cautiously in patients with hyperthyroidism, coronary artery disease, hypertension, and diabetes. CAUTION: Do not shake Nasal Spray. Rinse Nasal Solution dropper or Nasal Spray tip in hot water after each use. No more than one person should use the same dropper bottle or nasal spray.

SIDE EFFECTS: Occasional local reactions: rebound congestion, slight burning or stinging, sneezing, dry nose. Occasional systemic effects: headache, drowsiness, lightheadedness, insomnia, palpitations. Overdosage in young children may produce profound sedation. DOSAGE: **Adults:** *Nasal Solution*—2 or 3 drops in each nostril every 4 to 6 hours. *Nasal Spray*—Squeeze rapidly once or twice in each nostril every 4 to 6 hours. **Children under 12:** *Pediatric Nasal Solution*—2 or 3 drops in each nostril every 4 to 6 hours. One drop should be used in infants under 6 months. *Pediatric Nasal Spray*—Squeeze rapidly once in each nostril holding tube upright; repeat every 4 hours as necessary. SUPPLIED: OTRIVIN® hydrochloride (xylometazoline hydrochloride CIBA) *Nasal Solution*, 0.1%; dropper bottles of 1 fluidounce, bottles of 1 pint. *Nasal Spray*, 0.1%; plastic squeeze tubes of 15 ml. *Pediatric Nasal Solution*, 0.05%; dropper bottles of 1 fluidounce. *Pediatric Nasal Spray*, 0.05%; plastic squeeze tubes of 15 ml. *Nasal Solutions* contain either 0.1% or 0.05% xylometazoline hydrochloride, triethanolamine, hydrochloric acid, sodium chloride, and phenylmercuric acetate 1:50,000 as preservative in water. *Nasal Sprays* contain either 0.1% or 0.05% xylometazoline hydrochloride, potassium phosphate monobasic, potassium chloride, sodium phosphate dibasic, sodium chloride, and benzalkonium chloride 1:5000 as preservative in water. *Consult complete literature before prescribing.*

CIBA Pharmaceutical Company, Summit, N. J.

CIBA

2/3329 MKL-1

Do your patients
shell out too much
for a diuretic?

The answer may be yes...if they're not on Hygroton. For instance, a therapeutic dose of a short-acting diuretic may cost 3 times as much as an equivalent dose of Hygroton. With Hygroton, in fact, you can usually do the job with just one tablet a day or one every other day. It's no wonder that the trend has been away from short-acting, multiple-dose, high-cost diuretics.

You may hear that a short-acting diuretic was more effective in a 400 mg. (ten-tablet) dose than Hygroton in a 200 mg. (two-tablet) dose. If one considers maximum recommended doses for each product, tablet for tablet Hygroton was clearly superior. Two tablets of Hygroton were found to produce almost 40% more natruresis and 20% more weight loss than five tablets of the other diuretic.* Note that these are maximum recommended doses!

For effectiveness, economy, and convenience, therefore, Hygroton is the diuretic to choose to start with and the one to stay with.

*Brest, A. N., et al.: J. New Drugs 5:329, 1965.

Natruresis above control values after maximum recommended doses (mEq./24 hours) in "normal" patients

111 5 tablets short-acting nonthiazide diuretic	152 2 tablets Hygroton

48-hour weight loss after maximum recommended doses in edematous patients with congestive heart failure due to arteriosclerotic or rheumatic heart disease

1.84 lbs. 5 tablets short-acting nonthiazide diuretic	2.2 lbs. 2 tablets Hygroton

Indications: Hypertension and many types of edema involving retention of salt and water.
Contraindications: Hypersensitivity and most cases of severe renal or hepatic disease.
Warning: With administration of enteric-coated potassium supplements, the possibility of small bowel lesions should be kept in mind.
Precautions: Reduce dosage of concomitant antihypertensive agents by at least one-half. Discontinue if the BUN rises or liver dysfunction is aggravated. Electrolyte imbalance and potassium depletion may occur; take special care in cirrhosis or severe ischemic heart disease, and in patients receiving corticosteroids, ACTH, or digitalis. Salt restriction is not recommended.
Side Effects: Dizziness, weakness, nausea, vomiting, hyperglycemia, hyperuricemia, headache, muscle cramps, postural hypotension, constipation, leukopenia, thrombocytopenia, agranulocytosis, impotence, dysuria, transient myopia, skin reactions, including urticaria and purpura, epigastric pain, or G.I. symptoms after prolonged administration.
Average Dosage: One tablet (100 mg.) with breakfast daily or every other day.
Availability: Tablets of 100 mg. in bottles of 100 and 1000.
For full details, see the complete prescribing information.
6524-V(B)

HY-4736S

Hygroton®
chlorthalidone

Geigy
Geigy Pharmaceuticals
Division of
Geigy Chemical Corporation
Ardsley, New York

Lutrexin®

HW&D BRAND OF LUTUTRIN

3000 UNIT TABLETS

IN THE TREATMENT OF FUNCTIONAL DYSMENORRHEA
AND SELECTED CASES OF PREMATURE LABOR AND 2N
AND 3RD TRIMESTER THREATENED ABORTION

In controlling abnormal uterine activity, LUTREXIN, the non-steroid "uterine relaxing factor" has been found to be the drug of choice by many clinicians.

No side effects have been reported, even when massive doses (25 tablets per day) were administered.

Literature on indications and dosage available on request.

Supplied in bottles of twenty-five 3,000 unit tablets.

HYNSON, WESTCOTT & DUNNING, INC.

BALTIMORE, MARYLAND 21201

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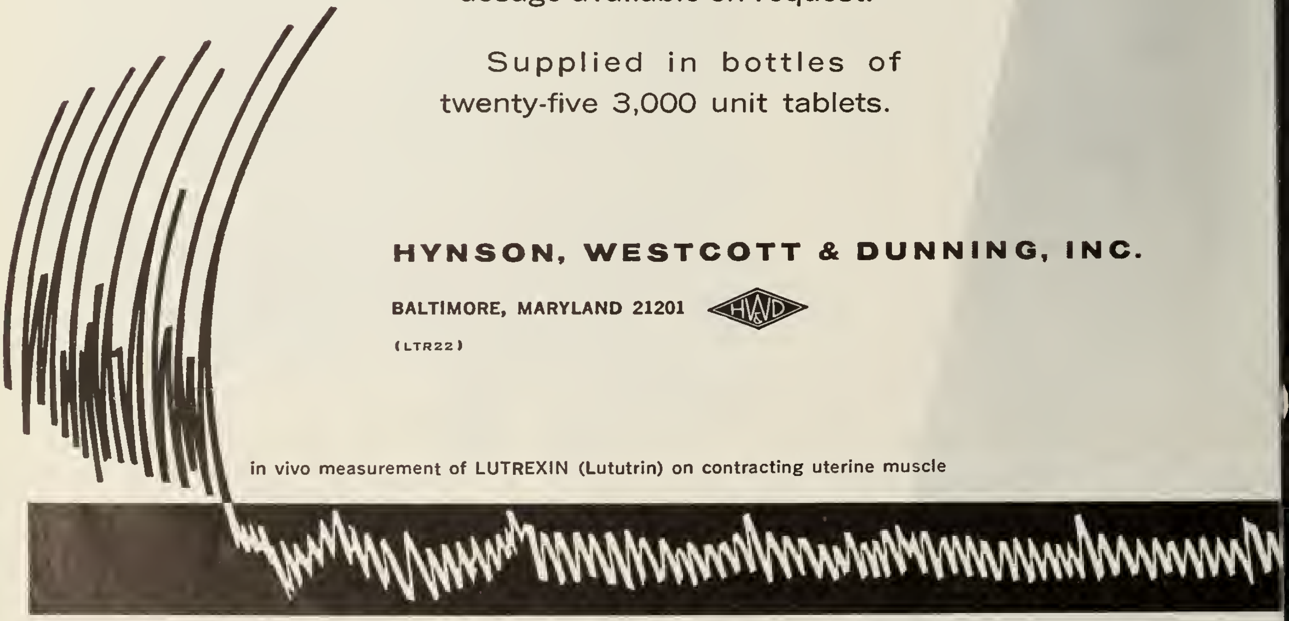

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Contraindications: Patients with known hypersensitivity to the drug.

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Precautions: In elderly and debilitated and in children over five, limit dosage to smallest effective amount, increasing gradually as needed and tolerated. In general, concomitant use with other psychotropics is not recommended. Paradoxical reactions have been reported in psychiatric patients and hyperactive aggressive children. Variable effects on blood coagulation have been reported very rarely in patients receiving the drug and oral anticoagulants; causal relationship has not been established clinically. Observe usual precautions in presence of impaired renal or hepatic function, impending depression and suicidal tendencies.

Adverse reactions: Drowsiness, ataxia and confusion may occur, especially in elderly and debilitated. These are reversible in most instances by proper dosage adjustment, but are also occasionally observed at the lower dosage ranges. Syncope occurs rarely. Also encountered are isolated instances of skin eruptions, edema, minor menstrual irregularities, nausea and constipation, extrapyramidal symptoms, increased and decreased libido—all infrequent and generally controlled with dosage reduction; changes in EEG patterns (low-voltage fast activity) may appear during and after treatment; blood dyscrasias (including agranulocytosis, jaundice and hepatic dysfunction) may develop occasionally, making periodic blood counts and liver-function tests advisable during protracted therapy. Individual maintenance dosages should be determined.

Dosage: Oral—Adults: Mild to moderate anxiety and tension, 5 or 10 mg t.i.d. or q.i.d.; severe states, 20 or 25 mg t.i.d. or q.i.d. Geriatric patients: 5 mg b.i.d. to q.i.d.

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The Journal of The SOUTH CAROLINA Medical Association

Medical Schooling in South Carolina XII
Maternal Mortality
Medicare-Medicaid

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ANNUAL MEETING - MAY 8, 9, 10, 1967
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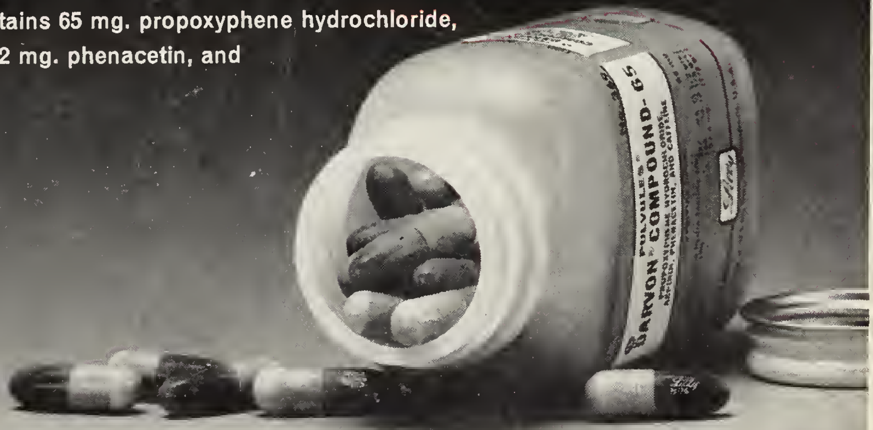

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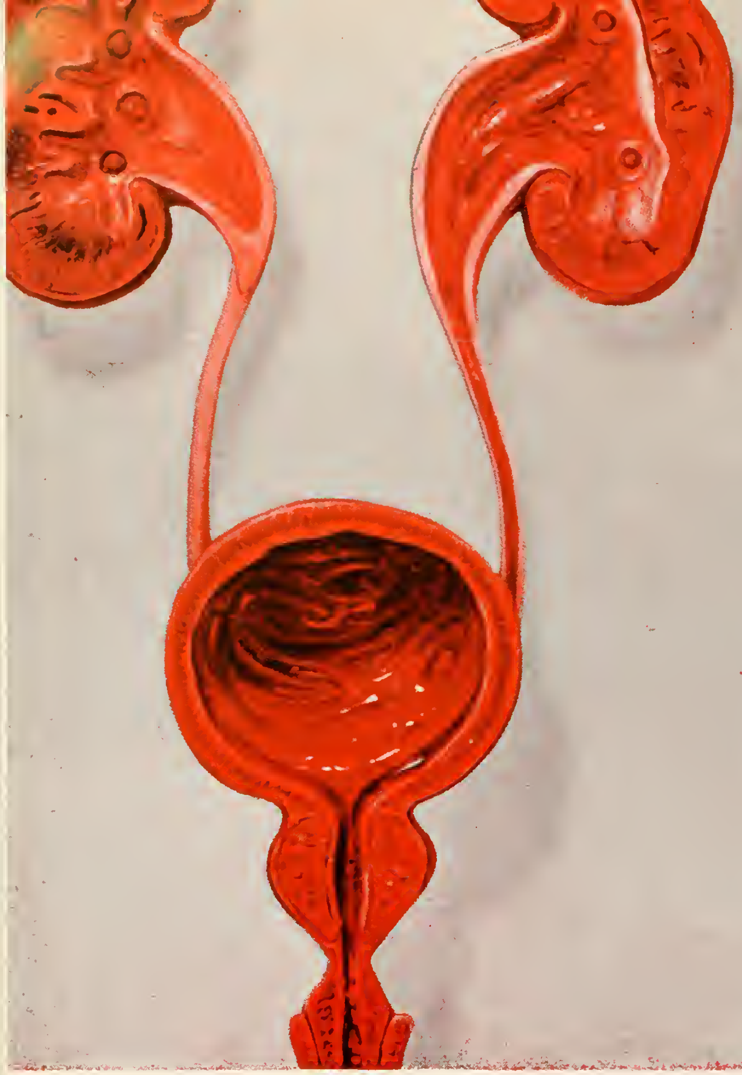
1967



Diagnosis:

cystitis?
pyelonephritis?
pyelitis?
urethritis?
prostatitis?

in any case,
usually gram-negative*

Therapy:

two 500 mg. Caplets® q.i.d

(initial adult dose)

Indications: Urinary tract infections caused by gram-negative and some gram-positive organisms.

Side effects: Mainly mild, transient gastrointestinal disturbances; in occasional instances, drowsiness, fatigue, pruritus, rash, urticaria, mild eosinophilia, reversible subjective visual disturbances (overbrightness of lights, change in visual color perception, difficulty in focusing, decrease in visual acuity and double vision), and reversible photosensitivity reactions. Marked overdosage, coupled with certain predisposing factors, has produced brief convulsions in a few patients.

Precautions: As with all new drugs, blood and liver function tests are advisable during prolonged treatment. **Pending further experience, like most chemotherapeutic agents, this drug should not be given in the first trimester of pregnancy. It must be used cautiously in patients with liver disease or severe impairment of kidney function.** Because photosensitivity reactions have occurred in a small number of cases, patients should be cautioned to avoid unnecessary exposure to direct sunlight while receiving NegGram, and if a reaction occurs, therapy should be discontinued. The dosage recommended for adults and children should not arbitrarily be doubled unless under the careful supervision of a physician. Bacterial resistance may develop.

When testing the urine for glucose in patients receiving NegGram, Clinistix® Reagent Strips or Tes-Tape® should be used since other reagents give a false-positive reaction.

Dosage: Adults: Four Gm. daily by mouth (2 Caplets® of 500 mg. four times daily) for one to two weeks. Thereafter, if prolonged treatment is indicated, the dosage may be reduced to two Gm. daily. Children may be given approximately *25 mg. per pound* of body weight per day, administered in divided doses. The dosage recommended above for adults and children should not arbitrarily be doubled unless under the careful supervision of a physician. Until further experience is gained, infants under 1 month should not be treated with the drug.

How supplied: Buff-colored, scored Caplets® of **500 mg. for adults,** conveniently available in bottles of 56 (sufficient for one full week of therapy) and in bottles of 1000. **250 mg. for children,** available in bottles of 56 and 1000.

References: (1) Based on 23 clinical papers, 1512 cases. Bibliography on request. (2) Bush, I. M., Orkin, L. A., and Winter, J. W., in Sylvester, J. C.: Antimicrobial Agents and Chemotherapy—1964, Ann Arbor, American Society for Microbiology, 1965, p. 722.

NegGram

Brand of

nalidixic acid

a specific anti-gram-negative

eradicates most urinary tract infections...

- Low incidence of untoward effects; no fungal overgrowth, crystalluria, ototoxic or nephrotoxic effects have been observed.
- "Excellent" or "good" response reported *in more than 2 out of 3* patients with either chronic or acute gram-negative infections.[1]

*As many as 9 out of 10 urinary tract infections are now caused by gram-negative organisms: E. coli, Klebsiella, Aerobacter, Proteus, Paracolon or Pseudomonas[2]... However, infections of the urethra and prostate caused by non-gonococcal gram-negative organisms are believed to be less prevalent.

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MARCH, 1967 — VOL. 63, NO. 3

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"Why do you call the

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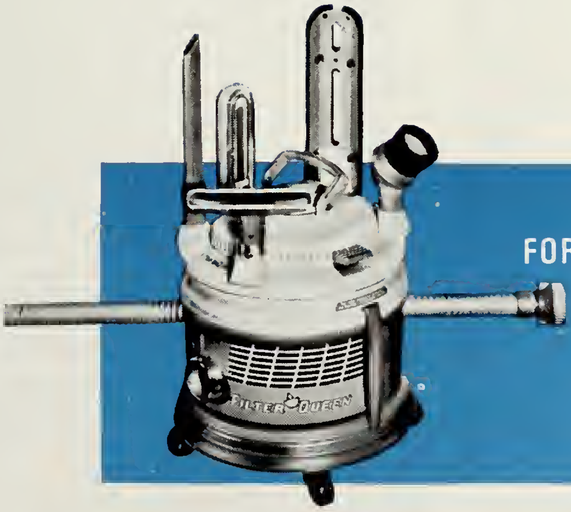
a sanitation system

instead of a vacuum cleaner?"



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(The problem of overcoming increasing air pollution is one of the most urgent facing your institution and the entire community today. How FILTER QUEEN, through its unique, patented Filter Cone helps combat air pollution while it cleans, should be of vital interest to every member of your hospital staff. We hope you will mark these pages and route them accordingly.)

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The FILTER QUEEN sanitary filter cone is a scientifically-designed dust separator, composed of a special long-fibred mat of pure cellulose, chemically treated to give it the necessary strength and air-filtering characteristics.

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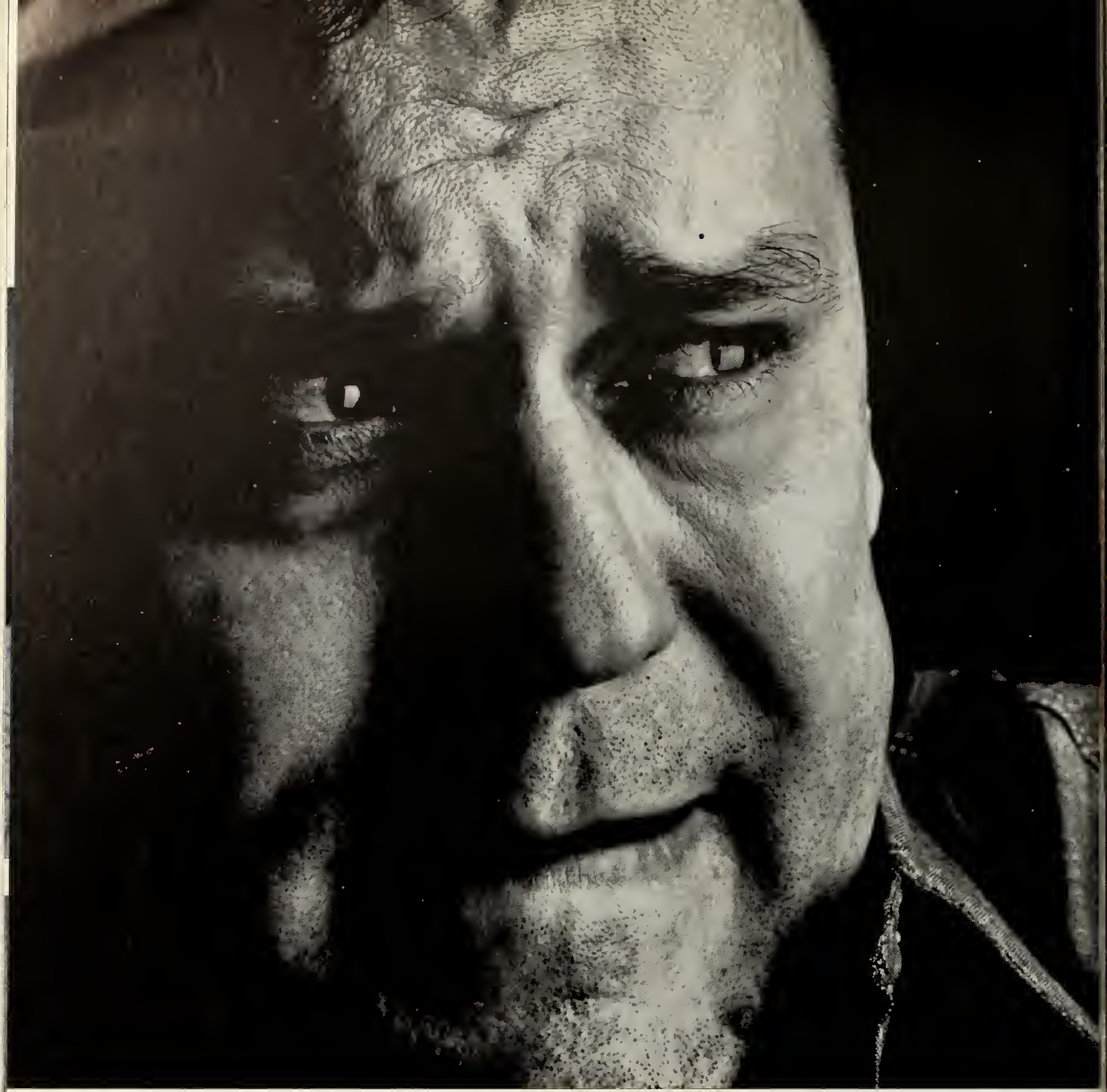
You'll find FILTER QUEEN Sanitation Systems listed in your Yellow Pages under "Vacuum Cleaners". (That's because FILTER QUEEN is fast replacing ordinary vacuum cleaners.)

FILTER QUEEN

The cleaning method that does so much more it has to be called a Sanitation System.



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Mike expects a penicillin injection. He's about to be pleasantly surprised.

His physician is going to prescribe an oral penicillin —Pen • Vee® K (potassium phenoxymethyl penicillin). It's usually so rapidly and completely absorbed that therapeutic serum levels are produced in 15 to 30 minutes. Higher serum levels generally last longer than with oral penicillin G.

Indications: Infections due to pathogens susceptible to oral penicillin G. Prophylaxis of rheumatic fever in patients with previous history of the disease.

Precautions: Skin rash, symptoms resembling those of serum sickness, or other manifestations of penicillin-allergy may occur. Measures for treating anaphylaxis should be readily available: epinephrine, oxygen and pressor drugs for relief of immediate allergic reactions; antihistamines and corticosteroids for delayed effects. Penicillin may delay or prevent the appearance of primary syphilitic lesions. Patients with gonorrhea who are suspected of concurrent syphilitic infections should be tested serologically for at least 3 months. Where lesions of primary syphilis are suspected, dark-field examination should precede use of penicillin. As with other antibiotics overgrowth of nonsusceptible organisms may occur; if so, discontinue and take appropriate measures. Treat β-hemolytic streptococcal infections with full therapeutic dosage for at least 10 days to prevent development of rheumatic fever or glomerulonephritis.

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Composition: Tablets—125 mg. (200,000 units) and 250 mg., (400,000 units); Liquid—125 mg. (200,000 units) and 250 mg. (400,000 units) per 5 cc. **Wyeth Laboratories Philadelphia, Pa.**

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With these three therapeutic building blocks you can create a once-a-day regimen to fit almost any degree of hypertension. See the following pages for details . . .

Consider starting your hypertensives on this basic thiazide

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Enduron eliminates sodium around the clock, yet is relatively sparing of potassium

Enduron is a true 24-hour single-dose thiazide. Its sodium excretion is not squeezed into an abrupt peak during the first several hours. It is well-sustained in a plateau-like effect — with little reduction in intensity during the first 12 hours, and decline thereafter only gradual.

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ENDURON®
METHYCLOTHIAZIDE

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			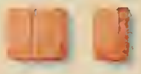	
	2.5 mg. tablet	5 mg. tablet	7.5 mg.	10 mg.

See Brief Summary on final page of advertisement.

To build added response, shift to Enduronyl

ABBOTT

The deserpidine component compares favorably to reserpine, but with reduced side effects

The rauwolfia component of Enduronyl is deserpidine (Harmonyl®), a purified crystalline alkaloid. It is comparable to reserpine in its antihypertensive and tranquilizing activity. Yet it produces less tendency toward typical rauwolfia side effects such as drowsiness, lethargy, stuffy nose, depression, etc.

Patient acceptance has been excellent.

Enduronyl comes in two strengths: regular and Forte. Both provide 5 mg. of Enduron. The variation is where most needed: in the deserpidine. These scored tablets give a surprisingly flexible choice of doses (see below).

Use Enduronyl for your patients within the broad range of mild to moderate hypertension. Dosage is *once* a day: this means Enduronyl will generally cost patients less than equivalent drugs taken two or three times daily.

Once a day, every day

ENDURONYL®

METHYCLOTHIAZIDE 5 MG. WITH DESERPIDINE 0.25 MG.

ENDURONYL FORTE

METHYCLOTHIAZIDE 5 MG. WITH DESERPIDINE 0.5 MG.

	Minimum	Usual	Intermediate	Maximum
DAILY DOSAGE RANGE	2.5 mg. methyclothiazide 0.125 mg. deserpidine	5 mg. methyclothiazide 0.25 mg. deserpidine	7.5 mg. methyclothiazide 0.375 mg. deserpidine	10 mg. methyclothiazide 0.5 mg. deserpidine
DAILY DOSAGE RANGE	2.5 mg. methyclothiazide 0.25 mg. deserpidine	5 mg. methyclothiazide 0.5 mg. deserpidine	7.5 mg. methyclothiazide 0.75 mg. deserpidine	10 mg. methyclothiazide 1 mg. deserpidine

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704075

Eutonyl affords a different kind of basic therapy for moderate to severe cases

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Effect tied to reduced peripheral vascular resistance; no central depressant action

Eutonyl is a unique nonhydrazine agent. It is reported to act by reducing peripheral vascular resistance, with little or no effect upon cardiac output.[1,2]

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Here, then, is a highly effective *basic treatment* for moderate to severe cases—and one that will not hamper your patient with lethargy or drowsiness while on treatment.

Once a day, every day

EUTONYL®
PARGYLINE HYDROCHLORIDE

DAILY DOSAGE RANGE	Minimum	Usual starting	Intermediate	Maximum
	10 mg. tablet	25 mg. tablet	50 mg. tablet or as needed	200 mg.

---

1. *Brest, A. N., et al., Cardiac and Renal Hemodynamic Response to Pargyline, Ann. N. Y. Acad. Sci., 107-1016, 1963.*
2. *Winsor, T., Pargyline Hydrochloride, Hypertension, Urinary Tryptamine, and Vascular Reflexes, Geriatrics, 19:598, Aug., 1964.*

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when it counts...

Chloromycetin®

(chloramphenicol)

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PARKE, DAVIS & COMPANY, Detroit, Michigan 48232

Complete information for usage
available to physicians upon request.

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"George wants to know if it's okay to take his cold medicine now, Doctor, instead of seven o'clock?"

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NOVAHISTINE® LP

DOW **PITMAN-MOORE** Division of The Dow Chemical Company, Indianapolis

BSP® DISPOSABLE UNIT

HW&D BRAND OF SODIUM SULFOBROMOPHTHALEIN INJECTION, USP

(50 mg. per ml.)

BSP®

BROMSULPHALEIN®
IN A COMPLETE,
STERILE,
DISPOSABLE,
& ECONOMICAL
PATIENT-UNIT.

BSP, one of the more valuable single laboratory procedures for determining hepatic function, is now packaged in a complete individual patient-unit.

Each BSP Disposable Unit contains a sterile syringe with the 5 mg./kg. BSP dosage schedule imprinted on the barrel, a sterile needle, alcohol swab and a 7.5 ml. or 10 ml. size ampule of terminally sterilized Bromsulphalein solution.

This all-inclusive disposable put-up lessens the chance of cross-infection and saves time and labor— the most costly commodities.

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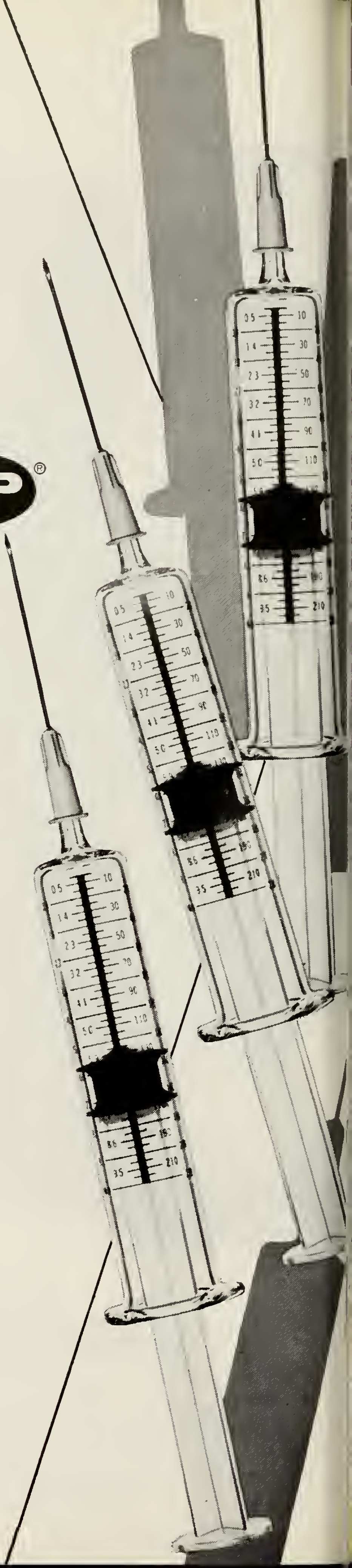

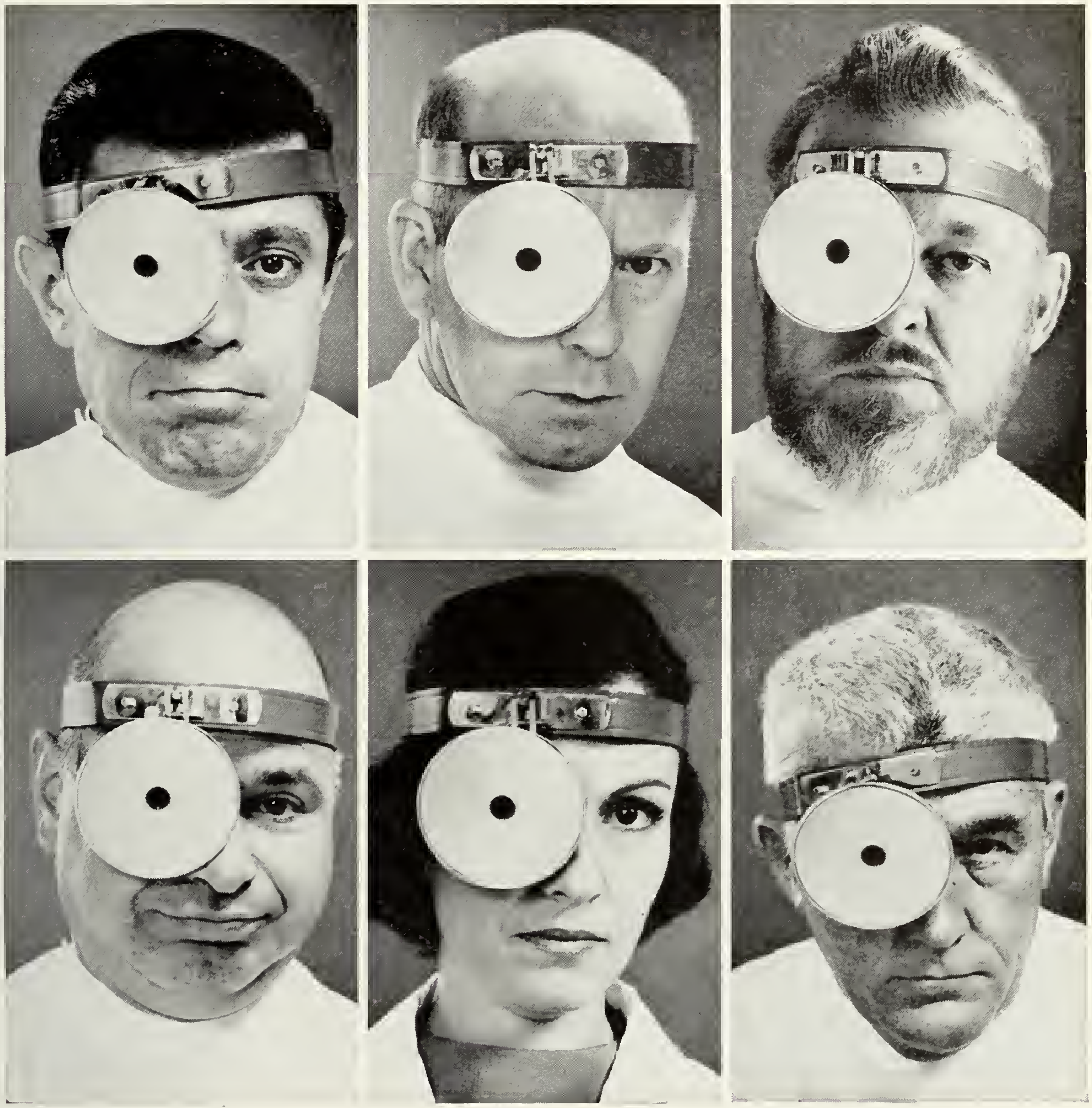

"All Otolaryngologists are Alike"

Just look at them and you can see how much they have in common. Besides, they all go through pretty much the same training, and pass the same kinds of tests, and measure up to the same sort of standards. Therefore, all otolaryngologists are alike. Right?

Wrong! But that's no more preposterous than what some people say about aspirin. Namely: since all aspirin is at least supposed to come up to certain required standards, then all aspirin tablets must be alike.

Bayer's standards are far more exacting. In fact, there are at least nine *specific differences* involving moisture content, purity, potency and speed of tablet disintegration, which make the manufacture of Bayer® Aspirin so different.

These Bayer standards result in significant product benefits, including gentleness to the stomach and product stability, that enable Bayer Aspirin tablets to *stay* strong and gentle until they are taken.

So next time you hear someone say that *all* aspirin tablets are alike, you can say, with confidence, that "it just isn't so."

You might also say that all otolaryngologists aren't alike, either.

when he just can't sleep

Tuinal®

Sodium Amobarbital and Sodium Secobarbital

(One-Half Sodium Amobarbital and One-Half Sodium Secobarbital)

Tuinal helps wakeful patients fall asleep fast, stay asleep all night.

Indications: Tuinal, comprised of equal parts of Seconal® Sodium (sodium secobarbital, Lilly) and Amytal® Sodium (sodium amobarbital, Lilly), is indicated for prompt and moderately long-acting hypnosis.

Contraindications: Barbiturates should not be administered to anyone with a history of porphyria, nor should they be given in the presence of uncontrolled pain, because excitement may result.

Warning: May be habit-forming.

Precautions: Tuinal should be used cautiously in patients with decreased liver function, since prolongation of effect may occur.

Adverse Reactions: Idiosyncrasy, such as excitement, hangover, or pain, may appear. Hypersensitivity reactions occur in some patients, especially in those with asthma, urticaria, or angioneurotic edema.

Dosage: 1½ to 3 grains at bedtime.

Supplied: ¾, 1½, and 3-grain Pulvules®.

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SOUTH CAROLINA MATERNAL MORTALITY FOR 1964

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A maternal death is defined as "the death from any cause of a woman during pregnancy or within 90 days of the termination of pregnancy irrespective of the duration of the pregnancy at the time of termination or the method by which it was terminated." We in South Carolina hardly need to be reminded of such a definition, since our state has had the distinction of ranking very near the top in maternal deaths for many years. The year 1964 was no exception. No longer can we attribute our dilemma to midwives, who were responsible for less than 9% of all the deliveries in our state. There is little question but that ignorance is frequently a major factor; however, in some instances this trait is reflected more in the physician than the patient.

This analysis was undertaken through the South Carolina Medical Association's Maternal Health Committee and any effort on the part of this committee to judge or castigate those reporting maternal deaths would destroy its primary purpose and function. Due to the limited information submitted, an even greater and more primary pitfall would be any attempt to decide with a reasonable degree of accuracy precisely who is responsible. In many instances the inadequate information precludes discussion of the case from any standpoint. The purpose is rather to discover what, if any, preventable factors are involved in maternal deaths and to discuss measures and means to bring about the irreducible minimum of maternal deaths in South Carolina.

When several factors were said to have contributed to a maternal death, the primary cause of death is listed according to which of these, in our opinion, was the most significant. It is well recognized that occasional errors in assignment may have been made because of the problems inherent in such a retrospective review.

During the year 1964 there were 56,874 live births and 36 maternal deaths reported. By comparison in 1963, there were 58,304 live births and 42 maternal deaths, while in 1962, there were 58,144 live births and 42 maternal deaths. Of the total births in 1964, 33,262 were white and 23,612 non-white. The maternal deaths are listed in Table I according to race and legitimacy.

TABLE I

Race	*No.*	*Legit.*	*Illegit.*	*Unknown*
Negro	28	21	6	1
White	8	8	0	0

The overall rate or incidence of maternal death per 10,000 live births was 6.4 as compared to 7.2 in 1963, and 7.2 in 1962. This gives an incidence of one maternal death in every 1,579 live births.

Table II shows the age and parity of distribution.

TABLE II

	Negro	White
Age	14-39	19-33
Average	26	25
Primi.	5	1
Secund.	2	2
Multi.	18	3
Unkn.	3	2

In Table III are listed the primary causes of maternal death and the incidence of autopsies.

TABLE III

	Negro	White	Autopsy
Hemorrhage	9	2	2
Sepsis	4	2	1
Pulmonary Embolus	3	2	2
CVA	3	1	1
Toxemia	3	0	0
Rheumatic Heart Disease	1	1	1
Acute Glomerulonephritis	1	0	1
Amniotic Fluid Embolus	1	0	1
Intestinal Obstruction	1	0	0
Anesthetic	1	0	0
Coronary Occlusion	1	0	0

Toxemia was reported as the primary cause of death in three cases as compared with 15 in 1963, although toxemia was known to be present in 11 of the patients, as seen in Table IV.

TABLE IV

	Negro	White
Eclampsia	3	0
Pre-eclampsia	7	1
No toxemia	10	4
Unknown	8	3

All four patients with cerebral vascular deaths were known to have toxemia or hypertensive cardiovascular disease or both. One delivered a full-term live infant but expired shortly postpartum from a CVA which apparently resulted from a congenital vascular malformation. A postmortem cesarean section with delivery of a live infant was performed on a 39 year old colored female with a long history of hypertension. An autopsy failed to show any evidence of a CVA. Two of the five cases of pulmonary embolus were confirmed by autopsy. One was in a 33 year old white female 20 weeks pregnant who had an appendectomy for acute suppurative appendicitis. Approximately two hours after surgery, when she was fully reactive, she became quite dyspneic, cyanotic, and expired shortly thereafter. An autopsy showed a huge pulmonary embolus. Another case of pulmonary embolus was noted in a 31 year old white female who had a normal prenatal course, labor and delivery. She expired one hour after delivery. An autopsy revealed an embolus completely blocking the left pulmonary artery. The death attributed to amniotic fluid embolus was documented by autopsy. It followed an apparently normal term labor and delivery. The two deaths attributed to rheumatic heart disease were in two documented cases of rheumatic fever. One died four days postpartum after delivery of a term infant and the other death was in a patient who was only six months pregnant. The eleven cases attributed to hemorrhage deserve further analysis. The breakdown of the causes of hemorrhage is shown in Table V.

TABLE V

Breakdown of Hemorrhage

	Negro	White
Ruptured uterus	4	2
Abruptio placentae	2	0
Ruptured ectopic	1	0
Ruptured ovarian cyst	1	0
Laceration of vagina	1	0

One of the cases of ruptured uterus followed the use of intravenous pitocin in a patient who had previously had conization of the cervix. Examination of the cervix was not carried out immediately after delivery. One followed rupture of an old uterine scar. Another death followed the use of intravenous pitocin in a pre-eclamptic patient. Yet another was from a cervical laceration which extended into the lower uterine segment, and was not detected at the time of suturing of the cervix. Still another one involved multiple lacerations following a precipitate delivery in a 14 year old colored primigravida. Another death occurred in an 18 year old colored female approximately 20 weeks pregnant who sustained multiple injuries from an automobile accident, one being a laceration of the perineum extending into the peritoneal cavity. Midwives were associated with both cases of abruptio placentae. The one death attributed to ruptured ectopic pregnancy was in a patient that had been hospitalized previously for suspected threatened abortion and had received several units of whole blood because of anemia. The ruptured ovarian cyst, described as a "spindle cell tumor" occurred in a 25 year old colored female who had stillborn twins, delivered by cesarean section. This had apparently ruptured during labor and caused massive internal bleeding.

Two deaths attributed to sepsis occurred in infected abortions. One death followed septicemia from a pseudomonas colitis confirmed by culture. One patient died of septicemia from postpartum endometritis. Yet another death was attributed to hepatitis.

The death attributed to anesthesia was in a patient undergoing an elective second cesarean section for cephalopelvic disproportion. No other information was available on this patient.

Table VI shows the outcome of the pregnancies.

TABLE VI
Outcome of Pregnancy

	Negro	*White*
Delivered	23	6
Not delivered	3	3
Abortion	1	0

There were 15 living infants delivered and 14 were stillborn.

In Table VII an analysis of the time of death in relation to labor is shown.

TABLE VII
Time of Death

	Negro	*White*
Antepartum	6	3
Intrapartum	1	0
Postpartum	22	4

There was a striking paucity of prenatal care in these 36 maternal deaths as can be seen from Table VIII.

TABLE VIII
Prenatal Visits

	0	*1-2*	*3-5*	*6 or more*	*Unknown*
Negro	7	4	5	4	8
White	0	1	1	2	4

It is of note that from the information available concerning the deaths attributed to toxemia, none of the patients had any prenatal care.

In this group of 36 maternal deaths there were only five not attended by a physician. Thirty-one occurred in a hospital and in only two was a midwife involved.

On the basis of the information at hand, an attempt was made to determine which of these maternal deaths were preventable. This is summarized in Table IX.

TABLE IX

Preventable	19
Non preventable	17

It must be stressed that this assignment of preventability was based on ideal circumstances, whereas it is realized that in many situations the physician is laboring under severe handicaps.

The reduction of maternal deaths in the United States for the last several decades has been made largely by the availability of blood, antibiotics, and an increased awareness of the need for prenatal care. The three entities towards which these studies are directed, that is, toxemia, hemorrhage and sepsis, presist as the leading causes of maternal death in South Carolina. In localities where Maternal Welfare Committees are active, this reduction has been even more dramatic. It is hoped that by the continued efforts of this and other committees, women may approach childbirth with an ever increasing confidence of its successful outcome.

MEDICAL SCHOOLING IN SOUTH CAROLINA. XII.

Following Through: Campus Area.

KENNETH M. LYNCH, M. D., D. Sc., LL. D.
Charleston, S. C.

With the confidence of full success of the Expansion Program that came when the state and federal appropriations for construction of the Medical College Hospital were assured, attention could be turned to the many other parts of the overall Plan.

In 1944 almost the entire property of the Medical College consisted of its old incomplete quadrangle plant located on less than half of a block, bounded by Calhoun Street on the south and Lucas (now Barre) Street on the west. In addition it included a small lot just across Calhoun Street. The overall investment value of its holdings could hardly have been above the half million level, to which the state had contributed less than half.

The quadrangle was completed in 1952 by construction of the first building (Laboratory-Clinic) involved in the Expansion Program. It cost $739,400 of which $525,000 came from state appropriations and the balance from federal grants. This building provided space for extension of the Outpatient Clinic and relocation of the Department of Anatomy and the School of Pharmacy—thus vacating other space to permit expansion of the basic science departments so as to accommodate the promised increase in each medical class to 80 students.

Although the desired hospital was the key to the whole proposition, the acquisition of adequate land area for the other parts of the program visualized was really just as important. It was recognized that there would be great advantage in locating such an enterprise where the many people who would work in it and the multitudes whom they would serve would be close together. Moreover, it was of vital importance to have space for including other institutions for direct affiliation or association in the many functions of a modern medical college center. Opportunity for the auxiliary or related institutions and installations that could be expected to congregate about the Center itself was also important. In short, there would be great advantage—both to the readiness and availability of the many functional services to the people and in the economy of such an enterprise—in developing it in an intact area within a population center. By a combination of good fortune and foresight, precisely that has been accomplished.

In a short article entitled "Water, Mud and Marsh and a Medical Center," published in the 1964 Fall Issue of the *Bulletin* of the Medical College, the present narrator related some of the story of how a large area of tidal creeks and marsh (Figure 1) bordering the Ashley River in the western section of the City had been transformed from its pristine state into about half of the present Medical Center Campus and its peripheral installations—and how a donation of $6,600 from the Alumni Association was parlayed into a money value of around $28,000,000.

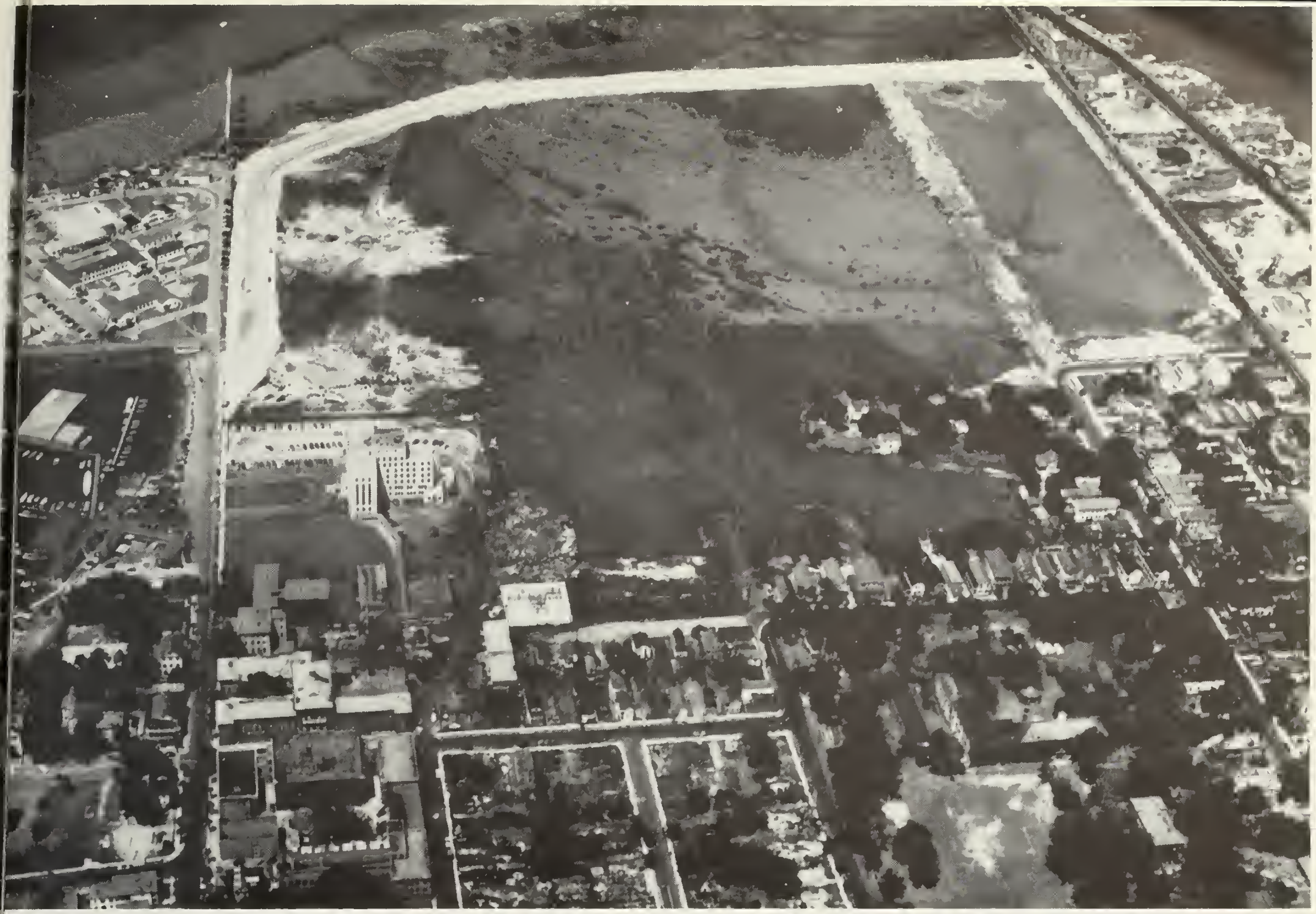


Figure 1. Marshland Site of the Western Part of the Medical Center in 1951.

The Roper Hospital trustees had acquired a part of that marsh immediately west of its "Old Roper" properties, and there it later (1948-1967) built its new plant. The only other occupied properties comprised a fringe of houses on the irregular edge of the marsh up to the approaches of the first of the present Ashley River bridges to be built (Spring Street).

Except for the extension of Roper Hospital grounds and a similar strip of land at the west end of Calhoun Street belonging to the Atlantic Coast Line Railroad, all of that marsh (some 35 acres) was owned by the City of Charleston. From discussions and negotiations came a harmonious agreement whereby one half of the area would be deeded to Charleston County and one half to the Medical College. The Atlantic Coast Line Railroad donated its piece of ground, with the specification that none of it would be used for any other purpose. That requirement, together with a provision that it must be developed within a certain period of years, was applied to the entire transaction, and the south half was deeded to Charleston County. The deed of the north half was presented to the Medical College by the Alumni Association on November 1, 1951.

There were of course no streets projected in the area. The present Courtenay Drive, then called Chinquapin Street, was open for only two blocks south from Spring Street, where it cornered with the west terminus of Bee Street. It is now a main north-south thoroughfare through the Medical Center. Doughty Street, on which the Medical College Hospital fronts, is now extended to Courtenay, and its line extended was made the dividing line between the halves deeded to the County and to the Medical College. Calhoun Street then terminated on the west at the Navy Minecraft Base (now gone) at the site of the old West Point Rice Mill. That area is now the location of the Municipal Yacht Basin, which was formerly opposite the new Roper Hospital. Lockwood Boulevard now provides the entire western boundary of the area, and has been extended southward to Broad Street along the river edge and northward to semi-cloverleaf approaches to and from the two Ashley River bridges. The area of marsh concerned is bounded by Lockwood Boulevard on the west, Calhoun Street on the south, Courtenay Drive on the east and Bee Street on the north. It is now completely occupied by new institutional buildings, (Figure 2) all brought in for participation in the Medical Center. Around the periphery are located two nursing homes, a rehabilitation center, a medical office building, two motels, a twelve-story apartment building and several small apartments. The general outlay of that section of the City is appropriate—and impressive.

The other land area acquired by the Medical College for inclusion in an undivided campus was a block of private properties immediately across Barre (then Lucas) Street from the Hospital site, and fringing on the east border of the same marshland. That ground, as well as an adjoining lot along Doughty Street extended, was purchased by separate state appropriation as a site for the School of Nursing building, new in 1956.

However, during the same period, opportunity for the development of an essential in the functions of a modern medical school was found—an experimental animal colony away from contact with human settlement. With the change in ocean port quarantine practices the Charleston Quarantine Station which had long occupied the historic Fort Johnson site at the eastern tip of James Island, directly across the harbor mouth of the Ashley River, was abandoned, and became "U. S. Surplus Property." The Medical College applied for the entire area, and then brought in the College of Charleston on a 50-50 basis, each institution receiving approximately 40 acres of this very valuable property.

Even with the almost unbelievable and timely success in securing an intact area in the City for a campus and the opportunity for gathering about it the desired kindred installations, when the several institutions joining the Center became actually located, the Medical College found itself "fresh out of land"—as expressed in the President's Annual Report of 1960. No room was left for new construction to replace the outmoded and altogether inadequate quarters of the basic science departments, the library, or the School of Dentistry authorized by the Legislature in 1953.

At the time of opening of the Medical College Hospital (1955) a planning group was formed comprising representatives from the various governmental, civic and private interests concerned, along with the present narrator. The purpose was to preserve the opportunity for growth of the Center and to ward off installations not desirable for relationship, or at least for service. Although this forum had no real authority, it did serve a useful purpose; certain business interests having ideas of advantages to be gained from locating adjacent to the Medical Center were induced to leave alone properties which would provide expansion acreage of the campus when the need should become recognized.

There were two alternatives in that prospect. One was expansion eastward through the remainder of the block occupied by the old quadrangle plant. The other contemplated the acquisition of the grounds owned and occupied by the Porter Academy, a boys' preparatory school. The latter comprised some 11 acres, which would allow as much building construction as could be logically forecast for the near future in the Medical College Plan—and on a "horizontal" spread.

The Porter Academy property was the more desirable. Moreover, it was expected to be more available—the Academy had also reached a point of need for expansion. Informal conversations with individuals of the Porter authorities and interests were intermittently pursued from the time when opening of the Medical College Hospital exposed the logical prospect to general view, although actual negotiations and conclusion of the deal did not come until the Legislature of 1963 appropriated $1,136,000 for the purchase during the administration of Dr. H. R. Pratt-Thomas as president of the Medical College. With the removal of the Porter Academy (now Porter-

Gaud School) to its new location across the Ashley River, the Medical College launched the next phase of the Expansion Program—and the last under immediate contemplation—under the present direction of Dr. William M. McCord as president. The Legislature of 1965 provided $6,000,000, and it has been matched by a federal grant of $8,250,000, just as this article is being written, January 16, 1967. From these matched funds the Medical College will construct buildings for the long-needed and authorized School of Dentistry, the library, basic science departments and administrative quarters. This will allow further increase of the medical class size to about 100 students each, as well as the acceptance of dental classes of about 48 students each, and will augment the opportunity for enrollment, production and services of all schools and departments of the institution.

For the benefit of future historical searchers for details, the chapel of the Porter Academy has been preserved, and the little antique gem of a library building has become the repository of the priceless collection of old medical books. It is also reported that another of the Porter buildings will be renovated to become the student activities center, so long sought, when its immediate use in organizing the School of Dentistry—under its new (and first) dean, Dr. John E. Buhler—is over. Also, a corner lot on President and Bee Streets has been donated for a retarded children's clinic.

That just about "wraps up" the geography of the Medical Center as it was sought and has now been secured. To square out and delineate the campus entirely by streets—which certainly would be desirable, and which may become very important as the years ahead unfold further expansion needs—the private properties filling the east half of the block back of the old quadrangle and those between President Street and Courtenay Drive would be required. The former would bring it just across the street from St. Francis Xavier Hospital. The campus area would then be a rectangle of more than 100 acres from Ashley Avenue to Ashley River and from Calhoun Street to Bee Street—a goal to dream about for the future.

Although the several land areas for the campus were acquired at different times, and while the institutions located on them were under their own controls, the entire development was according to plan. It was not a haphazard accomplishment. The County proceeded with its establishments rather promptly, but the Medical College held the site for the Veterans Hospital some ten years before that important affiliate could be matured. Even the current, and as yet unmatured, building program for replacement of the old quarters of basic science departments, library and administrative services was foreseen, while architects' plans for the Research Building were already being processed, and preliminary sketches of a dental school had been drawn by 1960. And, while all of the new buildings belonging to the Medical College itself have thus far been designed with Charleston "atmosphere" in mind, the other institutions on the campus have their own architectural individualities.

While the first building undertaken by the Medical College in the Expansion Program was the "Laboratory-Clinic Building," referred to previously in this article, the first to be constructed on the marshland was "Alumni Memorial House," living and dining quarters for unmarried men students. It cost $1,000,000, provided by a self-liquidating loan from the Federal Housing and Home Finance Agency and was furnished by contributions from the Alumni Association. It was occupied in 1954.

The third building, the Medical College Hospital, opened for service on September 26, 1955, cost $10,734,327, of which $3,329,865 came from State Appropriation and $5,733,910 by Federal (Hill-Burton) Grant, augmented by another state appropriation of $1,006,000 during construction and still another of $664,552 when the 10th floor was expanded in 1962. Large savings in the overall and unit costs of this 500-bed hospital were effected by reason of the fact that the Medical College already had available services in laboratory and clinic operations of all kinds. Consonant with the hospital construction the School of Nursing building went up just across Barre (then Lucas) Street, at a cost of $995,000 provided through the Tuition Revenue Bond Issue Act of 1953.

In the last year of the administration of the present narrator (1959-60) the fifth new building of the Medical College, the Research Building, was projected and funds committed for it amounting to $1,296,000 of which $648,000 was derived from the Tuition Revenue Bond Act and $648,000 from the new federal act providing grants for research construction. Its location had been chosen on Mill Street connecting it with the basic science and the clinical areas. Architect's plans were in process but it was not completed until 1962.

Thus was completed the essential physical plant for expansion of the School of Medicine into a full "approval" accreditation program for medical classes of 80 students each, 320 total medical undergraduates—double its former capacity.

In the meantime—success begetting success— the gathering of kindred medical and health institutions into the Center campus for association or affiliation with the Medical College proceeded according to plan—and for mutual advantage.

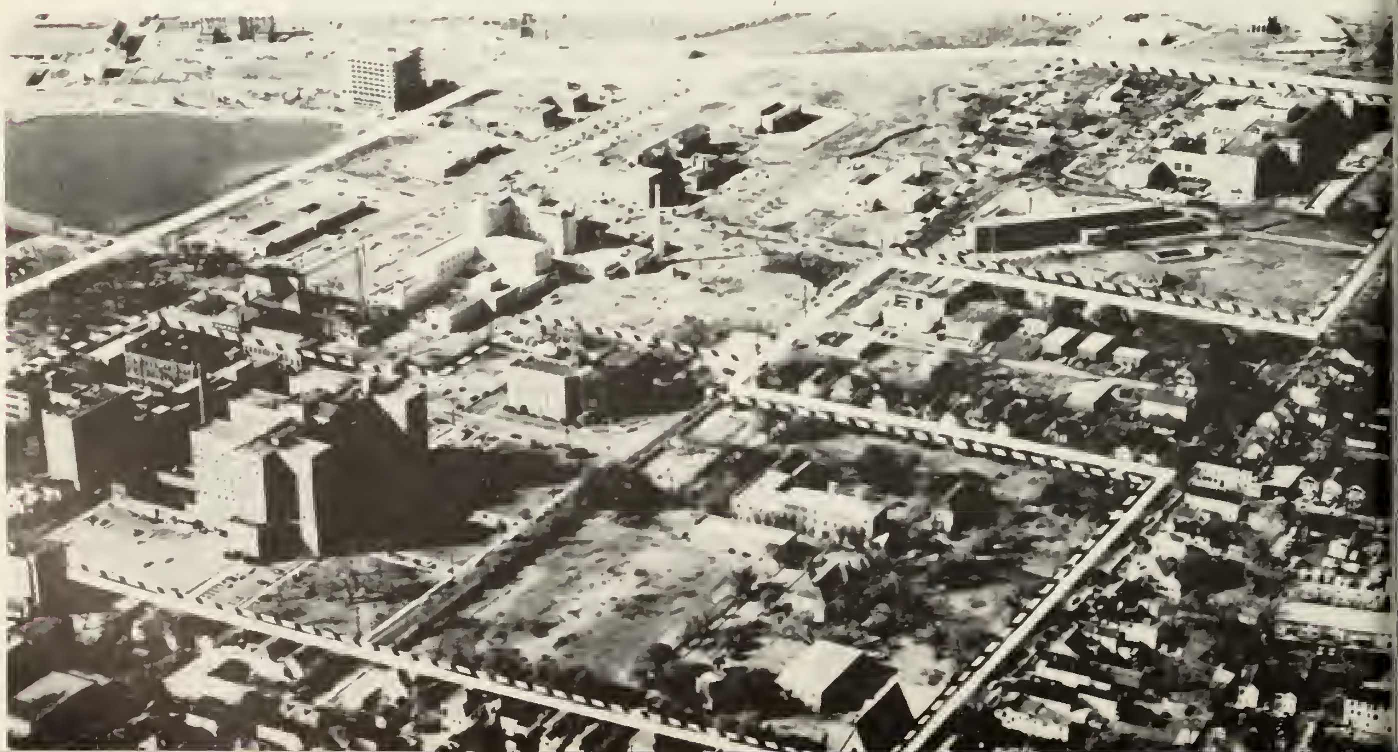
The Charleston County tuberculosis hospital, Pinehaven Sanatorium,[1] was relocated with a new building at Calhoun Street and Courtenay Drive in 1953. It has since been enlarged into a general hospital, Charleston County Hospital, which is just now (1966-67) going into full operation as an affiliated teaching hospital of the Medical College.

In 1959 the County built another small hospital, the McClennan-Banks, on Courtenay Drive. It is operated by the County for the accommodation of Negro doctors and their patients—a political subterfuge of dubious future.

The third institution to be located on the County's part of the marshland was its Health Center—Charleston County Health Department—the long-time dream of Dr. Leon Banov, County Health Officer. It has been recently announced that in relation to that new building, opened in 1961, is to be an expansion for enlarged public services, and it is hoped that the original design to affiliate the Health Center as the "clinical base" for the development of a School of Public Health by the Medical College may soon be revitalized. That is the only part of the overall Master Plan for a complete health and medical educational, service and research center that has not as yet materialized; it is as important as any in the ever-deepening need for production of health and medical personnel.

Occupation of the western part of the Medi-

Figure 2. Marshland Completely Occupied, 1965.



cal Center campus that was marshland in 1951 was completed by the location there of the new Veterans Administration Hospital which was dedicated May 13, 1966. For its site the Medical College donated its entire holdings in that tract except the lot on which Alumni Memorial House had been built, while Charleston County rounded it out with an adjacent strip of its marsh.

Discussions concerning the location of a V. A. Hospital here date back to the end of World War II, when the policy of locating such hospitals thereafter where they could be affiliated with medical schools was developed. It was not until 1955, however, that it came under consideration with Dr. William S. Middleton, who had retired from the deanship of the School of Medicine at the University of Wisconsin to become Chief Medical Director of the Veterans Administration. Against some political resistance Dr. Middleton held firmly to the adopted policy, and the commitment to locating the next V. A. Hospital allotted to the South Carolina area for connection with the Medical College in Charleston was made on June 29, 1960, at a conference in Washington. Political elements delayed action, however, until a hearing was scheduled by the South Carolina Congressional Delegation on November 17, 1960, in Columbia. At that hearing the present narrator had the privilege and the honor of serving, by invitation, both the Medical College and the Veterans Administration as spokesman on the mutual advantages concerned. Soon thereafter announcement of the final approval was made.

With the Veterans Hospital and the Charleston County Hospital added to the Medical College Hospital, there are now some 1,200 or more hospital beds available for the teaching program, as against a maximum of about 300 up to 1955. This can accommodate the further increase of medical class size up to about 100 students each—as now proposed. Any greater increase of medical educational support by South Carolina should be weighed most seriously in competent judgment and not hastily from pressure of special interests—civic, commercial, professional, political or personal.

In the story of the long road traveled and the many obstacles that had to be overcome to reach a goal that seemed clearly in view all the way are illustrated the hazards, the disappointments, and the disillusionments along the course that a state institution must anticipate when setting out toward accomplishment of major proportions. It took ten years to secure the V. A. Hospital here even after waiting nearly as long for an opening. It took ten years to produce the beginnings of the physical outlay visualized in the Master Plan of the Medical College Expansion Program after nearly as long a period in jockeying for a start. It will have taken a similar period to complete the present effort involved in the final phase of the Master Plan of the 1940's, even though it was known as a "must" from the beginning.

All told it has taken 23 years to accomplish what has been done and to reach assurance of what has yet to be done.

To the present point in this narrative the major part has been concerned largely with laying the groundwork to make possible the functional operations of a present-day complete medical college center and with providing the workshops and the land on which to build them. Measured in terms of "MONEY," as it was capitalized in the records at the very beginning, in 1824, the investment value has grown from less than $50,000 at that time to less than $200,000 in 1914, to not more than $750,000 in 1944, to around $50,000,000 by the early 1960's, and will approach $70,000,000 or more by the 1970's. A speculator should also be aware that overall annual costs for this type of institutional operation may be expected to run about one third of construction costs.

From that material base this story must yet record the products attending the accomplishments.

> "It is truly not the value but the worth
> of a thing that is important."
> (Patricia Clafford)

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MEDICARE - MEDICAID AND THE DOCTORS OF SOUTH CAROLINA

As Viewed From The State Board Of Health

E. KENNETH AYCOCK, M. D.
State Health Officer

We in the United States have what we consider to be the best system in the world for the care of the sick and the injured. It has been built up through individual and community action, inspired by many professional and civic leaders and dedicated to the betterment of mankind.

Our health services industry has been based on the free enterprise principle that the recipients of health services should pay a reasonable price for the care they receive. As our society became more complex, we have used philanthropic and governmental support to build hospitals and to establish schools to train professional health workers.

The health services industry is an elephant among industries. Between 1950 and 1960 health services made a spectacular leap from 7th to 3rd place among the largest industries of the nation, a growth of 54%. The American people have increased the percentage of their income spent for the whole medical or health field by 64% in the last 36 years. They spent $40 billion in 1965, or nearly 6% of the gross national product.

Many factors have combined to create a demand for more and better services in the health field, and many problems have arisen or become aggravated because of the mounting demand for health services and the necessary buildings and workers to provide them.

Critics have said that a major flaw in the American system was the health care for the medically indigent. True, we doctors had said that our services were available to all regardless of ability to pay, but many persons were too proud to ask for free care and delayed seeking medical help far too long.

In recent years, Congress has passed a large number and variety of acts affecting the health services industry. This came to a climax in 1965 when more federal health legislation was enacted than in any other year in the history of our republic. The present administration has set as one of its goals bringing the benefits of modern health services to everyone of the 200 million people in our society regardless of any factor other than their need for medical care.

Our nation will meet this challenge in a way that is different from that found in every other country. It will not be a completely free enterprise buyer-seller system, and it is not going to be a system of socialized medicine such as many foreign countries have. We have been developing in this country over the past 175 years, and particularly for the last 30 years, a pluralistic system using many different kinds of institutions and arrangements, using both private services and public assistance in a relationship that no other country has experimented with. We think we will find that this American system of organized medical care will be both thriving and adjustable, one that will be able to deliver more medical care to more people and to improve the quality of medical care in a way that will surprise all of us ten or twenty years from now.

In the last 15 years both governmental and private expenditures in the health field have tripled, and the years ahead will witness a massive increase in both public and private financing of health services, although the public percentage will be higher.

The predominant form of payment for personal health care has already changed sharply because it had to. Direct out-of-pocket consumer payments covered more than four fifths of all personal health expenditures in 1940, but now cover less than half. In 1964 private health insurance paid 25% of all personal health expenditures, and third party payments met 82% of all costs for hospital care. Physicians received 43% of their gross income from third parties in 1964.

Private health insurance has not been able to cover adequately the health needs of the aged. In 1950 Congress provided federal matching grants to the states for payment for treatment of the indigent aged, blind, disabled, and dependent children directly to doctors, nurses, and health institutions. In 1960 Congress added Title XVI to the Social Security Act providing federal grants to the states to help pay the costs of medical services for aged people not on public assistance but who were unable to meet their medical expenses. This Kerr-Mills Program gave the states considerable latitude in determining eligibility and benefits, but many felt it was not consistent with maintaining the dignity and self-respect of the beneficiaries. Further consideration by Congress led to the enactment on July 30, 1965, of Public Law 89-97, which added Titles XVIII and XIX to the Social Security Act.

Title XVIII established two health insurance plans for the aged. A general prohibition was attached to both plans against any federal supervision or control over the practice of medicine or over any participating institution or agency. Every insured person was guaranteed a free choice to receive services to which he is entitled from any qualified person, institution or agency. No state is forbidden to provide, and no individual is forbidden to purchase other health services.

The plan covered in Part A of Title XVIII is called Hospital Insurance Benefits for the Aged although it also provides for post-hospital treatment in extended care facilities and home health services. Hospital care and other services must be certified by a physician as medically necessary.

The major benefit of this plan is up to 90 days of hospital care for each spell of illness, with the patient paying $40 deductible for the first 60 days plus $10 a day for the 61st and subsequent days. A spell of illness ends when a person has not been in either a hospital or a nursing home for 60 consecutive days. This insurance covers practically all hospital costs excepting physicians services other than interns and residents, personal conveniences such as telephone and television, the first three pints of blood, and private duty nurses. The hospital benefits of the plan became effective July 1, 1966, and I assume that most of you are quite familiar with it.

Another benefit of the hospital insurance is post-hospital care in an extended care facility which has an agreement with a hospital for the transfer of patients and the interchange of medical records. Coverage is for 100 days, but the patient must pay $5.00 per day after the 20th day. The patient must be hospitalized for at least 3 consecutive days and then transferred to the extended care facility for continued care of the same illness within 14 days of his hospital discharge. After discharge from the extended care facility, the patient could be re-admitted within 14 days without further hospitalization. These benefits became effective on January 1, 1967, so we are less familiar with the way they operate.

A third benefit of the hospital insurance is home health care which covers up to 100 visits during each one-year period following the patient's discharge from the hospital or extended care facility. This includes visiting nurse services and related services of physical therapists, speech therapists, occupational therapists, medical social workers, and home health aides. These services may only be provided to a patient who is home-bound and under the care of a physician according to a treatment plan established and reviewed by a physician.

The fourth benefit of the hospital insurance covers outpatient hospital diagnostic services excluding the part performed by physicians. The patient pays $20.00 and 20% of the cost above that for these services by the same hospital during any 20-day period.

The benefits for post-hospital extended care, for post-hospital home health services and for outpatient hospital diagnostic services were provided to promote the most efficient and economical use of existing health-care facilities while helping the beneficiaries to have available the kinds of services and levels of care most appropriate to their needs. This insurance program does not provide for health services to be furnished by the federal government or its employees. Instead, it provides a means of payment for services provided by hospitals, extended care facilities, and home health agencies which voluntarily qualify for participation in the program. If any of these services are not available to the beneficiary, then he will not receive them even though the government is willing to pay for them.

Payments to providers of services under the hospital insurance plan are based on reasonable costs and are generally made through intermediaries which have capabilities in the administration of health insurance plans such as Blue Cross-Blue Shield and private insurance agencies. Tax funds for this plan are kept in a separate Hospital Insurance Trust Fund.

After consultation with many national health organizations, the Department of Health, Education, and Welfare developed conditions which providers of service must meet to participate in this program. Arrangements were made with state agencies, usually state health departments, to determine whether the institutions applying to participate in the program meet the conditions and to consult with the ones which need help to qualify. Our assistant state health officer, Dr. Malcolm Dantzler, supervised the beginning of this work in South Carolina. We now have Dr. W. T. Leslie as full-time director of our work in the State Board of Health related to the health insurance for the aged, and also Mrs. Mary Reardon Black, who is consultant nurse for institutions. Prior to this time our major activity in licensing hospital and nursing homes has been concern for the adequacy of the physical plant and its sanitation. We, the South Carolina State Board of Health, are now committed to providing aid in the upgrading of medical and nursing care where this is needed.

The conditions for participation of hospitals are modeled closely after the requirements for accreditation by the Joint Commission on Accreditation of Hospitals. I wish to indicate that the conditions are drafted to promote desirable or ideal practices. The law itself sets minimum conditions which must be met if a hospital is to participate. These include 24-hour nursing service rendered or supervised by a registered nurse and either a registered nurse or a licensed practical nurse on duty at all times. A hospital which meets the statutory conditions but is found to have deficiencies in the conditions of participation may participate if it is making reasonable plans and efforts to correct the deficiencies and if it is rendering adequate care without hazard to the health and safety of the people it serves notwithstanding the deficiencies. As I previously mentioned, the State Board of Health has a unit especially organized to assist hospitals to comply with the conditions of participation.

Let us turn now to Part B of Title XVIII which provides supplementary medical insurance benefits for the aged. This is available on a voluntary basis to all residents of the United States over 65. It is supported by a monthly premium of $3.00 a month which is matched by the federal government from general tax funds. In order to keep the monthly premium low, the subscriber has to pay the first $50.00 of Part B costs each calendar year and also to pay 20% of the costs over $50.00.

The major benefit covered by Part B insurance is *physicians' services* wherever they are furnished, whether in the hospital, clinic, office, home, or elsewhere. Part B also covers home services up to 100 visits during each calendar year without the requirement of prior hospitalization which applied in Part A, and it also covers diagnostic x-ray work, laboratory tests and other diagnostic tests; radiation therapy with x-rays, radium, and radioactive isotopes; surgical dressings, splints, casts, prosthetic devices other than dental, braces and artificial limbs and eyes; rental of durable equipment such as iron lungs, oxygen tents, hospital beds, and wheelchairs used in the patient's home; and ambulance service with limitations. Payment for home health services is based on reasonable costs of providing the service. Payment for physician's services is made to the patient, unless the physician accepted his assignment of the payment, and is based on reasonable charges. About 92% of those eligible have signed up for Part B insurance, and almost all are keeping up the payments.

We estimate that about 176,000 South Carolinians 65 and over are covered by medicare's Part A and that some 165,000 are covered by Part B. The medicare division of the South Carolina Blue Cross-Blue Shield pays out some $400,000 in hospital and medical expenses a week for the state's 65-and-over citizens. From July 1, 1966, to January 26, 1967, 20,509 claims received under Part A have resulted in payments of over $5¼ million to South Carolina hospitals and nursing homes, and during this same seven-month period Blue Cross-Blue Shield has received 42,845 bills under Part B amounting to about $4¼ million.

Title XVIII is a nationwide combination of hospital insurance for persons over 65 financed by a payroll tax on all workers and medical insurance financed by voluntary contributions of people over 65 matched by federal tax funds. At the same time this was passed, Congress added a new Title XIX, called "Medicaid," to the Social Security Act establishing a single and separate program of medical care for the needy which enlarges the health care programs for the needy previously covered by the Social Security Act.

In contrast with Title XVIII, each state may decide the extent, if any, to which Title XIX is implemented within it. South Carolina has not yet decided how far it can go. The law allowed the states to begin participating on January 1, 1966, if they so chose, and already more than half of the states are doing so.

The federal share of medical assistance expenditures under Title XIX is related to the per capita income in the state. For South Carolina, the federal government would pay a little more than 80% of Title XIX costs, no matter how much the total is, when it is put into effect here. So South Carolina's major problem is to see how far the State can go in paying 20% of the costs of medical care for the indigent.

Each state sets its own qualifying criteria. Some states are limiting eligibility to persons who get monthly welfare assistance checks. The biggest program is that of New York State where a single wage earner with an after-tax income of $2900 or a family of four with an after-tax income of $6000 is considered medically indigent.

Another important consideration for South Carolina to think about is that the law provides that by July 1, 1975, the State must furnish comprehensive care and services to all medically indigent persons in order to qualify for federal funds. This means that by 1975 the State must plan to use its own money to pay all the costs of care for all medical indigents who are not included in the federal program—which is mainly adults aged 21 to 64. As a poor state, South Carolina has a relatively high proportion of medical indigents.

Also to be considered is the range and extent of medical benefits which the State will include in its Title XIX program. Through proper administration of Title XIX, we have the opportunity to raise health services to medical indigents to the level of our more fortunate citizens and thus to eliminate much of the excess mortality and morbidity among the poor.

Both Titles XVIII and XIX require determination of the reasonable cost of health services. Hence, greater emphasis will be given to cost accounting in our health institutions. The definitions of costs developed in these federally supported programs may well be adopted by Blue Cross and other private insurers.

The law aims much higher than the mere paying of medical bills, and the physicians in South Carolina in order to achieve its high purpose will need to assume responsibility for planning and establishing systems of high quality medical care, comprehensive in scope and wide in coverage.

The implementation of Title XIX involves first developing a method for establishing patient eligibility and second, working out a plan for medical administration which will establish the scope, content and priorities of medical services; the provision, continuity, and quality of medical care and continuing evaluation of services offered. The third phase will be the determination of cost of implementation of Title XIX, the source of local matching funds (be they from state or county), and the rate of physician payment and reimbursement of hospital and other providers of health services. The rate of payment must be sufficient to insure quality care and therefore cannot be separated from the medical administration aspects of Title XIX. It is *medical administration* which the State Board of Health feels it should be primarily concerned with and given the responsibility for. The administration of adequate medical care programs calls for the right service for the right patient at the right place at the right time. To insure such, the State Board of Health feels that the administration of an adequate health service calls for the right professional people doing the right job in the right organization framework under the right medical supervision.

Although Title XIX will provide such distinct advantages as eliminating financial barriers for medical care and provide a means whereby persons may seek necessary medical care at the earliest possible time, there are certain inherent dangers to established patterns of medical care which should be enumerated and which could be eliminated or controlled through the proper medical administration of Title XIX.

1. The first of these problems is free choice of physicians. Free choice of physician is not denied under Title XIX. However, I am sure it is the desire of every physician now providing services in South Carolina to insist that those persons receiving medical assistance under Title XIX receive their medical care from qualified physicians. Furthermore, there should be no lowering of the high standards of medical care under Title XIX that have been gained on such programs as Crippled Children and Maternal and Child Care Programs now currently administered by State Board of Health.
2. A medical advisory committee should play a very strong part in the overall operation of the medical assistance rendered under Title XIX. While it must be admitted that the primary objective of a medical advisory committee should be that of establishing fees and free choice, it should also concern itself in the area of standards, procedures, quality medical care and consideration of grievances as related to providing of medical services.
3. *Fees*: There is no question that the day of discount fees for welfare patients is fast approaching or has approached an end. This is as it should be, and the physician should receive his usual and customarily prevailing fees for services rendered.
4. *Possible abuse of program.* There is certainly the likelihood that a certain percentage of patients will, upon receiving an identification card under Title XIX program, visit physicians' offices or clinics unnecessarily or with undue frequency. This practice is not unknown among self-paying patients or those carrying voluntary insurance, and it would be unrealistic not to expect it to occur among persons covered by medical assistance. This problem can be dealt with properly, once recognized.
5. *Method of payment*: Considerable concern has been expressed as regards method of payment. The requirements of making payment only to providers of service is clearly stated in the administrative rules of the United States Department of Health, Education, and Welfare

and is related to both the previous federal legislation concerning federal assistance to state welfare medical programs and also to the wording of Title XIX itself, which refers to making payment in behalf of patients rather than to patients. Therefore, it is anticipated that the physician will not be permitted to bill patients on Title XIX, but he may either bill the Department of Welfare or fiscal intermediary, should Welfare decide to have one.

6. *Preservation of teaching patients.* Considerable question has been raised as to the future of clinics and ward services of teaching hospitals when patients have the right of free choice of physicians and the physician has the right to receive payment for services he performs in the hospital for his patient regardless of the existence of interns and residents there. There is no question this poses a serious threat to our traditional method of teaching medical students, interns, and residents. This problem, however, could be resolved on a regional basis for the areas involved, with a mutual understanding of all physicians practicing in such an area regarding patient care.

These are just a few of the problems to be anticipated in the medical administration of Title XIX. I hope that I have given you some idea of the MEDICAID TRIANGLE, physician, patient and administrator. The separation, or wedge, between patient and physician is determined by the amount of influence exerted by the administrator. The choice is now yours to determine how wide this breach will be. In my opinion, the administrator should be removed equally from both patient and the physician; and while it is necessary that he must occasionally make contacts with each, this can be at a far greater distance than that separating the patient and the physician. If the administrator of the medical care aspect of Title XIX has medical knowledge, training and experience resulting in an appreciation of the physician-patient relationship, then indeed the administration of Title XIX can serve primarily as a catalyst to insure that quality medical care is provided with all fairness to patient and physician, rendering at the same time the medical administration responsibility to the governing body and to the community and people at large for assuring an efficient and effective medical care program.

President's Page

In a few years title XIX will be in operation in this state as it already is in a number of large states. The Governor of each state has the authority to appoint the Board of Health or the Department of Public Welfare to supervise the medical aspects of this program. As the law now reads, if the Department of Public Welfare is appointed that Department will receive more funds, not for the operation of title XIX itself, but for other purposes. According to Mr. Wilbur Cohen, and the latest legislative digest, this inequity will be corrected by this Congress. Governor McNair has appointed or has indicated that he will appoint the Department of Public Welfare. It seems reasonable that the State Board of Health with its tie-in with physicians would be the logical choice to supervise the medical aspects of the program and the Department of Public Welfare would pass on whether or not the patient is medically indigent.

The Council of the S. C. Medical Association has endorsed this position. As president of the physicians of South Carolina, I have written our Governor twice and conferred with him once. Dr. Aycock has also broached the subject. So far no commitment has come from him. We shall continue to try to persuade him that the medical care of patients should be supervised by doctors and the determination of medical indigency should be left in the hands of the Department of Public Welfare.

George Dean Johnson, M. D.

50 YEARS AGO

The Journal of the South Carolina Medical Association

April 1917

A call was given by the Journal for Medical Volunteers for the war.

Dr. Tyler's Private Hospital in Greenville was advertised.

Treatment with Salvarsan was reported in several cases.

Eagle Brand Condensed Milk had a prominent advertisement.

Editorials

AMA Meeting June 18-22

The annual meeting of the AMA in Atlantic City promises more than the usual number of interesting features in many fields of medicine. Special attention is to be devoted to patient care, backache, healing and sex.

The 22 Sections will present programs of specialized attractions, and several specialty societies will meet concurrently. There will be a wealth of exhibits, motion pictures, and commerical displays, not to mention the enjoyable social functions.

The entire program will appear in the May 8 issue of the JAMA.

Who Should Administer Title XIX?

While the administration of Title XIX whenever it goes into operation in South Carolina has been assigned by the Governor to the Department of Public Welfare, there is strong feeling in many quarters that this health program should be under some active cooperative agreement with the State Board of Health, an agency which is already familiar with the handling of comprehensive health services.

Under some form of contract with the Department of Public Welfare, whose present function (such as determination of financial eligibility) would not change appreciably, the State Department of Health could continue to pursue its many activities which are essential for the optimal implementation of Title XIX. Therefore it would appear not only logical, but also to the advantage and best interest of both organizations, and to the State at large, that the administration of Title XIX be a mutual, cooperative endeavor. Sharing administrative responsibilities according to the capabilities of the two organizations would not only improve the services rendered, but it would be a mutual benefit resulting in great savings in administration cost and manpower.

Under agreement in reference to Title XIX, the Health Department might have supervision of standards for medical care and health services, enforce the present rules concerning the providers of these services, assist in medical planning, review and certify the quality of services for medical care, act as adjudicator in medical claims, furnish general guidance and direction in problems of a medical nature, assist in promoting proper rates of payment, and provide effective methods of control and utilization.

These would not be new functions for the Board of Health. All of them are essential matters for the administration of a program under Title XIX. Without a formal mutual agreement, between the state departments concerned, there would be endless duplication and confusion.

The State Board of Health is by law the sole advisor to the State in matters of health. Its present advice is desirable and logical, and should be followed for the benefit of the people of South Carolina.

Can The Medical Profession Meet Its Current Challenge?

The need for additional practicing physicians in South Carolina became quite apparent in the 1945-50 period immediately after World War II, with the shortage being even more acutely apparent in the rural areas and smaller towns of the state. Expansion of the student body of the Medical College of South Carolina was proposed, and various inducements in the form of scholarships were introduced to attract more physicians to practice in the smaller communities. As the population of the state has increased in the past twenty-five years, the increase has been in urban community expansion, with a general decrease of population of the rural communities. The majority of physicians entering practice during this time have established themselves in the urban areas, meeting the larger communties' needs, but the smaller communities have continued to have a real shortage despite the fact that of the increased number of graduates from the Medical College during the 1955-65 period, the percentage entering general practice has remained fairly stable, averaging about 35% of each class. Although about 30% of the graduates of each class during this same period of time have entered practice out of the state, this loss has been theoretically more than offset each year by the number of out-of-state graduates entering practice in South Carolina; but the number of this group of out-of-state graduates who have entered general practice has decreased significantly, although roughly 30% of this group continues to do so. The net result is that the number of physicians in the state who are in general practice has shown a continual decline during the 1930 to 1960 period. This same trend exists in all areas of the nation, and, in fact, South Carolina has proportionately a larger number of recent graduates entering general practice than do many other states.

The consensus of all students of the problem at local, state and national levels, and even to some degree by medical educators in some of the medical colleges, is that more physicians capable of general practice, or comprehensive medical care for individuals and family groups, are needed, not only in South Carolina, but nationally. How to meet this need still seems in the stage of debate and committee concern but not in acute enough focus to produce any except the most broad proposals, and these mostly of the pointing in alarm and concern frame of reference.

Further expansion of the Medical College of S. C. to classes of 102, or perhaps to 120 if faculty and facilities can be provided, would increase the number entering the field of general practice, if the same percentage of graduates continue to plan their professional careers as they have done so during the past thirty years. It is highly dubious, however, that this increase in graduate physicians, or even doubling the number by the mechanism of establishing a second medical school in the state, will provide any significant number who will establish themselves in rural areas or provide the smaller communities the number of physicians they wish to have. The expansion of the urban centers of population in South Carolina is now and predictably will proceed at such a rate that the needs for all types of practicing physicians in the larger centers of population will attract the greater number of graduates each and every year in the future, as they have in the more recent past.

The comments and suggestions of Dr. Robert F. Hagerty in his recent "Review of the Millis Report and Its Pertinence to South Carolina," published in the January 1967 issue of *The Journal,* point out these problems most clearly and graphically illustrate the numbers of persons whose needs are to be met by the physicians currently available to practice in the state. He has also issued a program outline calling for coordination in the training of physicians in medical techniques and knowledge in ways that will establish comprehensive professional capabilities for individual and family service. Dr. Hagerty has also pointed out that unless the medical profession and the medical school educators provide leadership, guidance, and clarity of purpose, then the communities and political bodies will provide solutions which in their eyes are proper. Cogent serious thought is now needed by the members of the medical profession if they are to seize the initiative and give the leadership. If not, the leadership in the changes and organization of services will be provided by the body politic to its satisfaction, regardless of medical opinion.

It is evident that the solutions must come by the utilization of group support with adaptation of transportation planning to provide accessibility to the physician by a patient when care is needed, not just at some hour of convenience. In some urban communities the hospital emergency room services have been expanded to provide for services not available otherwise by virtue of the limitations of human endurance of physician and patient.

The increasing necessity for diagnostic aids and laboratory guides for proper therapy is evident to all who wish to use sound therapeutic principles. Continual availability of such services as and when needed by the physician must be planned for. Proper spacing of physicians and ancillary and supporting services for population groups must be planned and worked for. It is very evident from the studies by the Sears, Roebuck Foundation Medical Assistance Plan and the AMA that community trade area populations of 3,000 to 5,000 are necessary for one physician's support where the basic economy is an agricultural one. It is unrealistic to believe that although physician-to-population ratios may ideally average out at some figure of 600 to 700 that very small communities of this, or double, or triple this size, can either provide ancillary services or support, attract, or hold physicians, or for that matter, other learned professions in any number. Not only because of economic stringencies but many other problems of living, such as schools, recreational and cultural deficiencies make life in relative isolation difficult and unattractive, if not to the physician, frequently for his family.

Expanding the number of practitioners is only one of the answers to the problems of providing the sort of medical care that individuals and communities want. Practicing physicians must find the answers, or they will be rapidly found for them, and tragically it may well be that the hour is now too late for them to be more than lieutenants in the solutions found, bearing all the stress of tactics, and sharing none of the grandeur of strategy.

Vince Moseley, M. D.

Difficulties in Communication

Some time ago this writer contributed an article to *Medical Times* entitled "The Importance of Communication," (February 1963). The statements made in it seem to me still true. However, there is another side to the matter.

The patient who hears or listens to what the doctor says is often not as guilty nor stupid as he seems. Let us look at the matter from his position, and all doctors should do this, even though it is difficult. As the poet, Robert Burns (1759-1796), has written, it would be well, if possible, to see ourselves as others do.

Usually, when visiting a doctor's office, the patient is apprehensive. It is difficult for him to answer the numerous questions asked, even if one has average intelligence and tries to be truthful. Also one should not exaggerate nor minimize. So, to give a complete and correct medical history is seldom easy for a layman or even a doctor, regardless of intelligence and honesty.

Next, when on the examining table, one's personal responsibility or apprehension should no longer play a part but it still does. This may be true of most people and to a greater degree of a doctor. It may be thought that a doctor, accustomed to many procedures, would have no fear or apprehension as a patient but such is usually not the case. Actually his fear is often intensified.

Regardless of the patient's occupation and his intelligence, he often fears a visit to the doctor's office. As a rule he postpones it, and often to his detriment, until it becomes imperative. This happens even in the case of a learned person. Edward Gibbon (1737-1794), the great historian, for many years permitted a hydrocele to enlarge without seeking relief and eventually this contributed to his early death.

In summary, the doctor should always try to communicate fully and truthfully. Often, without being at fault, he does not succeed.

Richard M. Pollitzer, M. D.

MEDICAL COLLEGE OF SOUTH CAROLINA

Seven new appointments have been made to the School of Medicine faculty. Dr. Norman Sollod has been appointed Associate in Medicine; he will work at the VA Hospital. Dr. Sollod has been on the staff of the VA Hospital in Columbia for the past nine years. Dr. William S. McAfee has been named Clinical Associate in Otolaryngology, and Dr. Bartolo Barone has been named Clinical Associate in Neurosurgery. Both physicians are associated with the U. S. Naval Hospital in Charleston.

New Clinical Instructors include Dr. Norman L. Sims, Dept. of Orthopedic Surgery; Dr. David R. Davis, Dept. of Anesthesiology; Dr. John H. Ramlo, Dept. of Otolaryngology; and Dr. Leroy C. Mims, Dept. of Pediatrics. The first three are stationed at the U. S. Naval Hospital, and Dr. Mims is in private practice in Charleston.

Recent promotions include Dr. Laurie L. Brown to Asst. Professor of Anesthesiology. Promoted to Clinical Instructor in Anesthesiology were Drs. George E. P. Buxton, Miller N. Richbourg, and Robert P. Linker.

Also recently announced was the appointment of Dr. Jasper L. McPhail as Assistant Clinical Professor of Surgery at the Medical College. Dr. McPhail is in the private practice of thoracic surgery and is Director of Medical Education at Spartanburg General Hospital. His appointment is another in the series of clinical appointments being made throughout the state.

Dr. McPhail is a graduate of Baylor University College of Medicine and took advanced training at the University of Mississippi Medical Center. He served on the faculty of Christian Medical College, Vellore, South India. He recently served as a Fellow in Cardiovascular Surgery with Dr. Michael Debakey at Baylor.

Faculty from the Medical College and engineers from the University of South Carolina met on February 24 in Charleston to talk about mutual interests in the field of biomedical engineering. In January a similar meeting took place between Medical College faculty and engineers from Clemson University. Both meetings have the same purpose — to develop closer ties between faculties of the state institutions and to offer possible avenues for cooperative problem solving in the expanding fields which involve both sciences and engineering.

Dr. David M. Hume, Chairman of the Department of Surgery and Stuart McGuire Professor of Surgery of the Medical College of Virginia, was guest speaker at the annual meeting of the Medical College Chapter of the Alpha Omega Alpha Honorary Medical Fraternity at 4:00 p. m. on March 10 in the Medical College's Baruch Auditorium. Dr. Hume spoke on "Organ Transplantation."

An organization meeting for Sigma Xi to establish a club on the Medical College campus was held on February 28. A club is the necessary organizational step which precedes a chapter. At present there are two chapters in South Carolina, one on the campus of the University of South Carolina and one at Clemson University. Installation of the club took place on March 17. Sigma Xi is an honorary society designed to recognize scientific achievement and original investigation and foster scientific research.

A grant of more than $500,000 from the National Heart Institute has been made to Dr. Melvin H. Knisely, Professor and Chairman of the Department of Anatomy at the Medical College, for a five-year period. It will support studies of circulation of blood in health and in disease and represents an extension and expansion of work supported by the National Institutes of Health over the past eight years.

Dr. Peter C. Gazes, Associate Professor of Medicine, has received a grant of $419,874 from the National Heart Institute, National Institutes of Health, for a seven-year project as part of a nationwide investigation of the effectiveness of four drugs in preventing heart attacks. Collaborating on the project will be Drs. Arthur V. Williams, Associate Professor of Medicine, and Grady H. Hendrix, Associate in Medicine. The four drugs are nicotinic acid, dextro-thyroxine, parachlorophenoxy, and CPIB.

The Graduate Education Committee of the American College of Surgeons has approved the residency in Thoracic Surgery at the Medical College (to include Charleston County Hospital, Medical College Hospital, and the Veterans Administration Hospital) and has made the approval retroactive for one year.

Dr. R. Randolph Bradham was recently chosen as a member of the Society of University Surgeons. Dr. Bradham joined the faculty as Clinical Associate Professor of Thoracic Surgery on January 1 of this year.

The first large-scale teaching machine in the Medical College has been installed in the office of Dr. Gilbert Bradham, Assistant Professor of Surgery. This machine, capable of transcontinental communication with established programs of surgical education in other institutions, will be used in a test of feasibility for medical students.

Dr. Julian Youmans, Professor of Neurosurgery, presented a talk, "Effect of Blood and Pantopaque in the Subarachnoid Space" by Drs. Youmans and W. D. Hiers, Assistant Professor of Pathology, at the Southern Neurosurgical Society meeting in Memphis, Tenn., on February 17.

Dr. Youmans has written the chapter on "Spinal Cord Injuries" in the 1967 edition of Conn's *Current Therapy* which was published in February.

The Spartanburg County Cancer Council presented a grant in the amount of $10,000 for cancer research to the Medical College on March 7. Mrs. John A. Wallace, president of the Spartanburg council, and Mason Alexander, treasurer, presented the money to Dr. William M. McCord, President of the Medical College.

DOCTORS IN THE NEWS

Dr. William S. Hall of Columbia, director of the South Carolina Mental Health Commission, has been reappointed a member of the Committee on Nursing of the American Medical Association. **Dr. Carium Joseph** of Charleston was installed as a Fellow of The American College of Obstetricians and Gynecologists at its annual meeting in Washington. **Dr. John L. Guy** has returned to Inman for general practice. His office is located in the Morrow Building, Bishop Street. **Dr. Hunter Rentz** of Columbia was named one of the Outstanding Young Men of the Year by the South Carolina Jaycees February 19. **Dr. Leslie C. Meyer**, an orthopedic surgeon, has assumed his duties as president of the Greenville General Hospital Medical Staff. Administrator **Arthur Simons II** and **Dr. C. J. Milling**, medical director, have announced the addition of a radiology department and the association of radiologists **Dr. Thomas A. Pitts, Dr. James F. Adams, Jr., Dr. Hoyt U. Bodie** and **Dr. Maurice B. Tanner** to the staff of Waverley Psychiatric Hospital, Columbia. **Dr. P. Kenneth Huggins** has been chosen medical chief of staff at Waverley. **Dr. Bruce Elliott**, Clover physician, has been elected Chief of Staff at Divine Saviour Hospital. Other new officers are **Dr. W. K. Wood** of York, vice chief; and **Dr. J. A. Patrick**, secretary. **Dr. S. D. Reid, Sr.**, 68, was named Chesnee's Distinguished Citizen in February in appreciation of his more than 40 years service to the community. **Dr. Everette M.**

Hughes of Union is the first of four full-time Columbia Hospital Emergency Room doctors to be hired. He began work in February. **Dr. H. Marcus** of Orangeburg has been appointed president of the S. C. Heart Association for Orangeburg County.

Dr. D. Strother Pope has been named to head the medical staff at the South Carolina Baptist Hospital, Columbia. Vice chief is **Dr. C. Tucker Weston. Dr. Charles F. Crews** will serve again as secretary. **Dr. Catherine M. McCottry** has announced the opening of her new office at 116 Smith St., Charleston, for the practice of obstetrics and gynecology. **Dr. W. D. Gilmore, Jr.** has announced the association of **Dr. Jim F. Hicks** for the practice of pediatrics at Wade Hampton Mall, Greenville. **Dr. Thomas C. McFall,** medical director and administrative head of McClennan-Banks Hospital, was recently presented a plaque by the Charleston chapter of the NAACP. U. S. Air Force **Capt. Robert E. Jackson** of Manning has been decorated with three Air Medals at England Air Force Base, La. **Dr. George G. Durst, Sr.,** immediate past president of the South Carolina Chapter, American Academy of General Practice, has been selected to serve on the Academy's committee on Mead Johnson Scholarship Awards. **Dr. Dale Groom** of Charleston has been reappointed a member of the Council on Scientific Assembly of the American Medical Association.

Dr. George G. Durst of Sullivan's Island will be among five alumni of Clemson University to receive a Distinguished Alumni Award in June from the institution. **Dr. Wilian S. Hall, Dr. Vince Moseley, Dr. Julian P. Price,** and **Virginia C. Phillips,** R.N. participated in the 3rd National AMA-ANA Conference in February.

Deaths

Dr. A. Clifton Smith

Dr. A. Clifton Smith, 87, of Glenn Springs died February 16 at the home of a daughter in New Orleans.

Known as "Dr. Cliff," he had practiced in this southern Spartanburg County village since 1905. He was graduated from the Medical College of South Carolina.

Dr. Smith was named doctor of the year by the Spartanburg County Medical Society in 1960.

Dr. Sol B. McLendon

Dr. Sol B. McLendon, 65-year-old superintendent and medical director of Crafts-Farrow Hospital, died March 7 after suffering a heart attack.

Born in Bennettsville, Dr. McLendon was a graduate of Presbyterian College and the Medical College of South Carolina.

On February 14, a $2.3 million medical center at Crafts-Farrow was named the Sol B. McLendon Clinical Center in his honor. He was a veteran of 35 years service at Crafts-Farrow (the State Hospital).

Dr. McLendon had a major role at the nearby institution for the mentally retarded, Pineland, where he was first acting clinical director in 1953.

He was a fellow of the American Psychiatric Association, a Diplomate in Psychiatry of the American Board of Neurology and Psychiatry and a member of local, state and national medical and psychiatric associations.

Dr. Julian Mims Riley

Dr. Julian Mims Riley, 31, of 29-B Mill St., Charleston died March 9 after being in declining health for some time.

Dr. Riley was born in St. Matthews. He was graduated from the University of South Carolina in 1963 and received his M.D. from the Medical College of South Carolina in 1967.

ONE HUNDRED AND NINETEENTH ANNUAL MEETING OF THE

SOUTH CAROLINA MEDICAL ASSOCIATION

MYRTLE BEACH, MAY 8, 9, AND 10, 1967

GENERAL PROGRAM

HOUSE OF DELEGATES

GEORGE DEAN JOHNSON, M. D., PRESIDING

ORDER OF BUSINESS

MONDAY, MAY 8

9:30 A. M. Call to Order
Invocation
Report of Credentials Committee
Opening Remarks by the President
Introduction of President-elect
Announcement of Reference Committees
Presentation of Resolutions and Recommendations

10:30 A. M. Introduction of Officers and Guests of Woman's Auxiliary
Reports of Officers:
  The President
  The President-elect
  The Executive Secretary
  The Secretary
  The Treasurer
  The Editor of the Journal
  The Chairman of Council
  The Delegates to the A. M. A.

Reports of Committees:
(The reports of the Committees will have been published in the Journal and will not be read before the House. Any supplementary remarks by the Chairmen will be heard at this time.)

11:00 A. M. (Special Order) The Annual Meeting of the Corporation, The South Carolina Medical Care Plan

Election of Directors:
The terms of the following expire this year:
Dr. A. C. Bozard
Dr. Charles J. Lemmon
Dr. Luther M. Mace
Mr. A. Preston Nisbet
Mr. Raymond Pridgen
Mr. Thomas C. Vandiver

Report of State Board of Medical Examiners

Report of Executive Committee of State Board of Health

Unfinished Business

New Business

3:00 P. M. *Meeting of Reference Committees*
(All members of the Association are invited to appear before the Committees considering matters in which they are interested. Meeting places will be posted and announced.)

TUESDAY, MAY 9

9:30 A. M. Call to Order
Reports of Reference Committees

11:30 A. M. Annual Elections

Officers:
President-elect
Vice President
Secretary
Treasurer

Delegate to the A. M. A. (2-year term):
The term of Dr. Joel W. Wyman expires December 31, 1967.

Alternate Delegate to the A. M. A. (2-year term):
The term of Dr. Joel W. Wyman expires December 31, 1967.

Councilors: (3-year terms):
Second District—The term of Dr. W. Wyman King expires. (1964)
Fifth District—The term of Dr. Roderick Macdonald expires. (1964)
Eighth District—The term of Dr. Joseph D. Thomas expires. (1961)

Members of Mediation Committee: (3-year terms):
Second District—The term of Dr. R. G. Latimer expires. (1964)
Fifth District—The term of Dr. Ripon W. LaRoche expires. (1961)
Eighth District—The term of Dr. James L. Wells expires. (1961)

Member of Benevolence Fund Committee (3-year term):
The term of Dr. Thomas G. Goldsmith expires. (1960)

Members of State Board of Medical Examiners (4-year terms):
Second Congressional District—The term of Dr. Kirby D. Shealy expires.
Fifth Congressional District—The term of Dr. Roderick Macdonald expires.

Member of State Board of Nursing Examiners (5-year term):
The term of Dr. Wyman W. King expires.

Member of Hospital Advisory Council to State Board of Health (4-year term):
The term of Dr. B. J. Workman expires.

Selection of Place for 1968 Annual Meeting.

Sine Die Adjournment.

SOUTH CAROLINA MEDICAL ASSOCIATION MEETING

SCIENTIFIC MEETING

TUESDAY, MAY 9, 1967

2:00 P. M.	DR. ROUSE
2:20 P. M.	Doctors Donald E. Saunders, Jr., Hugh H. DuBose and C. Warren Irvin, Jr. AN ANALYSIS OF THE FIRST HUNDRED MYOCARDIAL INFARCTIONS IN A SOUTH CAROLINA COMMUNITY HOSPITAL CORONARY CARE UNIT Paper to be presented by: Dr. C. Warren Irvin, Jr.
2:40 P. M.	Dr. Peter Hairston CARDIAC PACEMAKERS
3:00 P. M.	Discussion of papers by Doctors Saunders, et al and Hairston Dr. John Muller, Greenville, South Carolina
3:10-3:30 P. M.	Break to visit exhibits
3:30 P. M.	Dr. Charles Banov OFFICE MANAGEMENT OF ACUTE ALLERGIC REACTIONS
3:40 P. M.	Dr. Austin T. Hyde THE USE OF ALLPYRAL IN THE MANAGEMENT OF 686 ALLERGIC PATIENTS
4:10-4:20 P. M.	Discussion of Papers of Doctors Banov and Hyde Dr. Ben N. Miller, Columbia, South Carolina
4:20-5:00 P. M.	Clinical Pathological Conference Dr. E. DuBose Dent, Jr.

WEDNESDAY, A. M. — MAY 10, 1967

8:30-9:00 A. M.	Movie: THE MEASUREMENT OF DEPRESSION
	AMERICAN COLLEGE OF SURGEONS, S. C. CHAPTER Dr. William H. Amspacher, Coordinator
9:00 A. M.	1. National Library of Medicine Martin M. Cummings, M. D., Director
9:20 A. M.	2. National Cancer Institute Bayard Morrison, III, M. D., Assistant Director of the National Cancer Institution
9:40 A. M.	3. Regional Medical Centers Robert Q. Marston, M. D., Associate Director, National Institute of Health, and Director, Division of Regional Medical Programs
10:00 A. M.	COFFEE BREAK

MEDICAL COLLEGE OF SOUTH CAROLINA

10:15 A. M.	1. Current Diagnostic Techniques Gilbert C. Bradham, M. D., Assistant Professor of Surgery
10:35 A. M.	2. Current Status of Open Heart Surgery William H. Lee, M. D., Chief, Division of Thoracic and Cardiovascular Surgery
10:55 A. M.	3. Cancer in Children Biemann H. Othersen, M. D., Assistant Professor of Surgery
11:15 A. M.	INTERMISSION

PANEL DISCUSSION

11:30 A. M.	Martin M. Cummings, M. D., Bayard Morrison, III, M. D., Robert Q. Marston, M. D., Gilbert C. Bradham, M. D., William H. Lee, M. D., Biemann H. Othersen, M. D.
12:15 P. M.	ADJOURN

WEDNESDAY, P. M.

2:15 P. M.	Dr. Andrew J. Whitaker OCCULT RUPTURE OF THE SPLEEN
2:35 P. M.	Dr. Paul W. Sanders, III THE KEY TO URINARY INFECTION IN CHILDREN
2:55-3:00 P. M.	Discussion Papers – Doctors Whitaker and Sanders
3:00 P. M.	Dr. H. Biemann Othersen, Jr. CONSTIPATION IN CHILDREN – DIFFERENTIAL DIAGNOSIS AND TREATMENT
3:20-3:40 P. M.	VISIT EXHIBITS
3:40-4:00 P. M.	Dr. John W. Schofield TREATMENT OF TUMORS OF HEMATOPOIETIC SYSTEM
4:00-5:00 P. M.	SYMPOSIUM ON EMERGENCY ROOM CARE Dr. Gilbert B. Bradham, Moderator A Symposium on Emergency Room Care, Dr. Gilbert Bradham, presiding with Dr. Peter Gazes discussing Cardiology; Dr. Julian Buxton, General Surgery; Dr. Peter Hairston, Thoracic Surgical Problems; Dr. Charles Mitchell, Neurosurgical Problems, and Dr. John A. Siegling, Orthopedic Problems in the Emergency Room.

Dr. Buford Chappell

Chairman, Program Committee

SPEAKERS ON THE SCIENTIFIC PROGRAM

Dr. Peter Hairston

Peter Hairston, M. D. a native of North Carolina, graduated from Johns Hopkins Medical School in 1957, afterwards serving in the Johns Hopkins Hospital and at the University of Virginia Hospital where he was senior resident and also a resident in Cardiovascular and Thoracic Surgery. For two years he was Surgeon in Chief of Ramey AFB and is now Assistant Professor, Division of Thoracic Surgery, Medical College of South Carolina. Dr. Hairston is a diplomate of the American Board of Surgery and the American Board of Thoracic Surgery and holds membership in a number of medical organizations. He will summarize the experience of the Medical College of South Carolina in surgical management of heart block with special emphasis on the complications associated with, and following, insertion of a pacemaker.

Dr. E. DuBose Dent, Jr.

Dr. Dent is a native of Columbia and a graduate of the Medical College of South Carolina. He served a rotating internship at the U. S. Naval Hospital, Philadelphia, and then entered the U. S. Public Health Service and completed a four year residency at the U. S. Public Health Service Hospital, Baltimore. He was also connected with various other institutions in Baltimore. He became Chief of the Laboratory Service of the U. S. PHS hospital in Baltimore and later chief in a similar hospital in Norfolk. He has been in Columbia since 1956 and served briefly with the Veterans Hospital there, later with the Columbia Hospital and finally with the Baptist Hospital and Providence Hospital. He is Consultant in Pathology to the Columbia VA Hospital and several others. He is a diplomate of the American Board of Pathology in Pathologic Anatomy and in Clinical Pathology. He is a fellow of the College of American Pathologists, a member of the American Society of Clinical Pathology and a member of the International Academy of Pathology, as well as a number of other medical organizations. Dr. Dent will present the Clinical Pathological Conference.

Dr. Charles H. Banov

Dr. Charles H. Banov is a graduate of the Medical College of South Carolina, interned at Milwaukee County Hospital and served his residency in Internal Medicine and Allergy at Charity Hospital of Louisiana and The Massachussetts General Hospital. He is Clinical Associate in Medicine at the Medical College of South Carolina and conducts a private practice of allergy. He is a Fellow of the American College of Chest Physicians, of the American Academy of Allergy and an Associate of the American College of Physicians and a diplomate of the American Board of Internal Medicine.

Dr. Andrew J. Whitaker

Dr. Andrew J. Whitaker of Columbia is a native Georgian and a graduate of the Medical College of Georgia. He served internship and residency in surgery at Columbia Hospital. He is a fellow of the American College of Surgeons and a diplomate of the American Board of Surgery and practices privately in Columbia. He will speak on Occult Rupture of the Spleen.

Dr. Austin T. Hyde, Jr.

Austin T. Hyde, Jr., M. D. is a graduate of the University of Virginia College of Medicine, and served his residency at the University of Virginia and at Duke Hospital in Allergy and Pulmonary Disease. He is a member of numerous medical societies including the A. A. A. S., The American College of Physicians and is a Fellow of the American College of Allergy and an Associate Fellow of the American College of Allergy. He will speak on Use of Allpyral in the Management of 686 Allergic Patients.

Dr. H. Biemann Otherson, Jr.

Dr. H. Biemann Otherson, Jr. was born in Charleston, graduated from the Medical College of South Carolina and pursued post graduate education in the Philadelphia General Hospital, the Graduate School of Medicine at the University of Pennsylvania. He was general surgical resident at the Medical College of South Carolina and Pediatric Surgical Resident at the Children's Hospital in Columbus, Ohio and also Surgical Research Fellow at the Massachusetts General Hospital. He is a member of many medical societies. At present he is full time Assistant Professor of Surgery (Pediatric Surgery) at the Medical College of South Carolina. Dr. Otherson is certified by the American Board of Surgery and the American Board of Thoracic Surgery. His subject will be Constipation in Children.

Dr. C. Warren Irvin, Jr.

Dr. C. Warren Irvin of Columbia is a graduate of Duke University and trained at Duke Hospital, Bowman Gray, and the Rhode Island Hospital. He is a diplomate of the American Board of Internal Medicine and the sub specialty board of Cardiovascular Disease, a Fellow of the American College of Physicians and a Fellow of the American College of Cardiology. He is also a member of the Board of Directors of the American Heart Association. He practices in Internal Medicine and Cardiology in Columbia.

Dr. Gilbert B. Bradham

Dr. Gilbert B. Bradham is a native of Sumter and was graduated from the Medical College of South Carolina in 1956 and has served through the surgical services at the Medical College Hospital. In addition he was a Graduate Research Trainee in Surgical Cardiology, UCLA Center for the Health Sciences. He is associated with many medical organizations and at present is Assistant Professor of Surgery, Medical College of South Carolina and a diplomate of the American Board of Surgery. Dr. Bradham will present a symposium on Emergency Room Care in which he will be assisted by a number of other physicians.

Dr. John W. Schofield

Dr. John W. Schofield is a native South Carolinian and a graduate of the Medical College of South Carolina. He served internships and medical residency at the Knoxville General Hospital and State University of New York, Syracuse. He was also resident in medicine at the Memorial Hospital New York City and is a member of the staff of the McLeod Infirmary and Saunders Memorial Hospital in Florence. He will discuss Treatment of Tumors of Hematopoietic System.

Dr. Paul W. Sanders, III

Dr. Paul W. Sanders, III was born in Charleston and is a graduate of the Medical College of South Carolina. He served an internship at the Medical College of Virginia and residencies in the Medical College of South Carolina and the Charity Hospital in New Orleans in Urology where he was Chief Resident and Instructor at Tulane. He is a clinical assistant in Urology at the Medical College of South Carolina and is in private practice. He is a diplomate of the American Board of Urology and member elect of the A. U. A., and belongs to a number of other medical societies.

Dr. Milford O. Rouse

Banquet Speaker

Dr. Milford O. Rouse of Dallas, Texas, our banquet speaker, was chosen President elect of the A. M. A. in June 1966 and will take office this year. Previously he had served as Speaker of the House of Delegates and at one time was Vice-speaker of the House. Born in Texas, he spent part of his boyhood in Brazil and Cuba and later graduated from the Baylor College of Medicine and interned at Ft. Sam Houston Station Hospital. He has practiced in Dallas since 1928, specializing in gastroenterology and is Clinical Professor of Medicine in the University of Texas Southwestern Medical School. He has been a medical writer and has been active in the various organizations to which he belongs. These include the American Gastroenterological Association and the American Therapeutic Society. He is a diplomate of the American Board of Internal Medicine and the subspecialty Board of Gastroenterology, and is a life fellow of the American College of Physicians. He was president of the Southern Medical Association in 1958-59 and has been most active in many medical organizations. He has received a number of special awards, including the distinguished service award for the Southern Medical Association.

CONGRESSMAN OMAR BURLESON, DEMOCRAT

17TH CONGRESSIONAL DISTRICT OF TEXAS

SCALPEL BANQUET SPEAKER

Omar Burleson, of Anson, U. S. Representative form the 17th District of Texas, was elected to the 80th Congress, taking his seat in the House in January 1947, and has been re-elected to succeeding Congresses, through the current 89th Congress.

He is now Chairman of the Committee on House Administration, and ranks second to the Chairman of the powerful Committee on Foreign Affairs in the House, being Chairman of the Subcommittee on National Security and Scientific Development Affecting Foreign Policy. He is Chairman of the Joint Committee on the Library (of Congress), Vice-Chairman of the Joint Committee on Printing, and is a member of the Library of Congress Trust Fund Board.

Burleson served as County Attorney and County Judge of Jones County over a period of eight years. In 1940 he became a Special Agent of the Federal Bureau of Investigation, resigning to enter the Navy in World War II and was in the service three and one-half years with duty in the North Atlantic and South Pacific. He was discharged as a Lieutenant Commander in the U. S. Navy.

Burleson attended public schools in Anson, attended Abilene Christian College and Hardin-Simmons University, and obtained his law degree from Cumberland University Law School; he later did graduate work at the University of Texas Law School.

He is a conscientious, consistent, and a progressive-conservative Democrat, serving his 20th year in the U. S. House of Representatives in Washington, D. C.

Mrs. Leon Banov, Jr., President

WOMAN'S AUXILIARY TO THE SOUTH CAROLINA MEDICAL ASSOCIATION

CONVENTION

The 44th annual convention of the Woman's Auxiliary to the South Carolina Medical Association will be held at Myrtle Beach, S. C., on May 8, 9, 10, 1967. A most cordial invitation is extended to all members and to each doctor's wife who is not a member to attend the general meeting and the social functions.

Registration will begin at 2:00 p.m. Monday, May 8, and continue until noon Wednesday, May 10, in the lobby of the Ocean Forest Hotel. Tickets for the luncheons on Tuesday and Wednesday may be obtained at the Registration Desk. All members and guests are cordially invited to both luncheons.

Arrangements have been made for a Hospitality-Exhibit Room at the Ocean Forest for the convenience of members and guests. Refreshments will be served by the hostesses and Bridge cards and tables will be available.

MONDAY, MAY 8, 1967

2:30 P. M.—Student Loan Fund Committee meeting in President's Suite, Mrs. W. P. Turner, presiding.

3:00 P. M.—President and President-elect, accompanied by Mrs. Asher Yaguda, President of the Woman's Auxiliary to the American Medical Association, present report to the House of Delegates, South Carolina Medical Association.

3:30 P. M.—Finance Committee meeting—President's Suite, Mrs. Haskell S. Ellison, presiding.

P. M.—SCALPEL Banquet, Ocean Forest Hotel Guest Speaker: Congressman Omar Burleson

TUESDAY, MAY 9, 1967

8:30 A. M.—Auxiliary Committee meeting with Council, South Carolina Medical Association.

10:30 A. M.—Executive Board Meeting, Pine Lakes International Country Club, Mrs. Leon Banov, Jr., presiding.

12:30 P. M.—All Members Luncheon — Pine Lakes International Country Club. Guest speakers—Dr. Julian T. Buxton, Jr. and Dr. Jennings K. Owens, both recently returned from Vietnam. Special guest—Mrs. C. T. Wilkinson, President, Woman's Auxiliary to the Southern Medical Association.

2:00 P. M.—Round Table Conference of County Presidents and Presidents-Elect, Pine Lakes International Country Club, Mrs. William J. Strohecker, President-Elect, presiding.

3:00 P. M.—Fashion Show—Ocean Forest Hotel—Tea and crumpets and clothes.

8:00 P. M.—Annual Banquet, Ocean Forest Hotel, Dr. George Dean Johnson, President, SCMA, presiding.
Guest Speaker—Dr. Milford Rouse, President-Elect, American Medical Association.

WEDNESDAY, MAY 10, 1967

10:00 A. M.—House of Delegates and General Meeting, Ocean Forest Hotel, Mrs. Leon Banov, Jr., President, presiding.

12:30 P. M.—Membership Luncheon, Pine Lakes International Country Club. Guest Speaker: Mrs. Asher Yaguda, President, Woman's Auxiliary to the American Medical Association.

2:30 P. M.—Post Convention Executive Board Meeting, Mrs. William J. Strohecker, President, presiding.

Convention assignments have been sent to each County Auxiliary. We sincerely hope that you will all participate in and enjoy the activities that have been arranged, and that you will help us make this convention an outstanding success. We are looking forward to seeing you in Myrtle Beach on May 8, 9 and 10, 1967.

Mrs. J. Ray Ivester, Convention Chairman
Mrs. Louis E. Nesmith, Convention Co-chairman

CLINICAL PATHOLOGICAL CONFERENCE

To Be Presented On May 9, 1967
Myrtle Beach, S. C.
DR. DuBOSE DENT, Moderator

Chief Complaint: Low abdominal pain.

Present Illness: In this 26 year old white female, who was divorced and who was working as a nurse's aide, lower abdominal pain had been intermittent for about 2 years. This became particularly bothersome in early May and she was admitted to the hospital for the first time.

Past History and Family History: Non-contributory.

First Hospital Admission: In early May, 1966, she was admitted to a local hospital for study. On May 14, 16, 17, she had an IVP, GI Series, and barium enema. All of these were within normal limits.

She was discharged in the middle of May, 1966, with a diagnosis of pelvic inflammatory disease.

Office Visits: About two weeks after discharge from the hospital, she again developed severe abdominal pain that forced her to "double up" because of severe discomfort. She was seen in consultation for a gynecological work-up, and it was felt that no significant Gyn pathology was present to account for her severe abdominal pain. It was felt that the pain was probably on the basis of a GU infection, and she was started on Terramycin, 100 mg, q.i.d. Her pain persisted. She switched physicians and again she had upper GI series and IVP on June 10 and June 11, respectively. These were nonrevealing. She was followed along as an out-patient, continuing to have severe abdominal pain. These episodes began to be associated with nausea and vomiting. The day prior to her second hospital admission, she began having rather severe vomiting of brown fecal colored material and was unable to keep anything by mouth. At about this time, she noted that her voice was beginning to change, having a nasal quality to it, and that there was difficulty with swallowing.

Second Hospital Admission: On June 19, the patient was admitted to the hospital for further evaluation and treatment. There was no history of trauma or exposure to toxins of any kind. She denied any intake of alcoholic beverages. She was on tetracyclines up until the time of admission for pelvic inflammatory disease or a GU infection, or both but had received no other medication.

Physical Examination: On June 19, the patient was an acutely ill young woman who would respond only when aroused and questioned persistently. Her throat was injected slightly, with no exudates or gross infections. Her chest was clear. Heart sounds were good, with sinus tachycardia. No murmurs were heard. Examination of the abdomen revealed marked distention. No peristalsis was heard. There were no masses palpable in the abdomen. Pelvic and rectal examinations were negative. T-103° F. P-120/min. BP 120/80.

Neurological examination revealed a left peripheral 7th nerve palsy. There was bilateral sixth nerve palsy. The right pupil was larger than the left and both reacted to light. On funduscopic examination there was fullness of the veins bilaterally but no papilledema. The patient had difficulty swallowing and had a nasal twang to her voice. A gag reflex was present. Tongue movements were normal. Hearing and visual fields were grossly intact. Nystagmus was noted on some examinations but this was not present on others. Sensory examination over the trunk and extremities revealed normal perception of pain with no sensory loss noted whatsoever. Motor testing revealed a generalized weakness of all the extremities with a fairly good range of motion. The patient was areflectic and no abdominal reflexes were noted. Plantar reflexes were down.

Laboratory Studies: On June 19: Urinalysis revealed a Sp.Gr. of 1.020, with no sugar, 4 + albumin, many WBC's and too many RBC's to count. Blood revealed WBC of 24,400 with 51% lymphs, 47% PMN's and 2% monos. The Hbg. was 17.5 Gm/100 ml with an Hct. of 56.

On June 19: serum potassium—3.9 m Eq/L; serum sodium—136 m Eq/L; serum chloride—100 m Eq/L; CO_2 combining power—20 m Mol/L; serum calcium—9.6 mg/100 ml BUN, 38 mg. Cerebrospinal Fluid, June 19: Sugar, 74 mg. protein, 70 mg. Cell count I WBC and I RBC. VDRL was non-reactive.

Urine prophobilinogen, uroporphyrin, and coproporphyrin were negative on two occasions. Urine arsenic: 0. Urine lead: negative. On June 23; stool examination showed 4 + blood with many cysts of Endomeba histolytica. On July 1, after treatment, stool was slightly positive for blood but no amebae were present.

ECG: June 20, normal except for sinus tachycardia.

X-rays: Chest and skull films on June 19 were negative. Flat plate and upright films of abdomen: Dilated loops of small bowel with average gas in colon—possibly obstruction.

IVP on June 21: Right kidney larger than average, otherwise no abnormalities. GI Series on June 22: Within normal limits.

Hospital Course: The patient's neurological deficit progressed from the time of admission to almost no hand grip bilaterally, and very weak leg movement to the point where the patient could not ambulate. This progression of her neurological deficit took place over the first four days of hospitalization. During this time, her temperature remained in the range of 102 to 103 degrees. On the 24th of June, her fever began to come down, and by the 27th of June, was normal. Temperature remained normal throughout the remainder of her hospital stay. She had tachycardia when the fever was in the range of 102-103°, but as the temp. came down, her heart rate returned to normal, and remained normal after the temperature was normal. At about the time the fever began to break on 24th of June, her neurological deficit slowly improved. On 22nd June, she began to have bowel movements and these initially were very loose diarrheal stools. (23rd June, started on chloroquine. 24th June, on Diodiquin). On the 27th, she began feeding herself, ambulating with assistance. There was some vomiting on the 28th of June, and the patient complained of some abdominal pain. On the 29th she began on a regular diet, and maintained this without difficulty. On July 1, her back and abdominal pain flared up somewhat and she complained of this over the next 3 or 4 days. This pain was relieved by Darvon Compound. By the time of her discharge on July 7, 1966, the patient was caring for herself and ambulating without assistance. The only residual of a neurological deficit was a generalized weakness without any focal signs. She was discharged home on July 7 on Aralen. She was to take this for three days, and Diodoquin for at least 21 days following her discharge.

Third Hospital Admission: On July 19, she was readmitted to the hospital with nausea and vomiting. Stools for ova and parasites were negative. The patient subsequently developed signs of intestinal obstruction. On July 22, an upright film of the abdomen showed a large amount of gas in the colon. There were dilated loops of small bowel present. This was thought to be due to an early intestinal obstruction or a paralytic ileus. There was no free air under the diaphragm. On July 25, films of the abdomen showed loops of bowel with air fluid levels present in the loops. This appeared to represent small bowel gas and the patient was felt to have a partial mechanical small bowel obstruction. The radiologist did not feel that there was quite as much gas at this time as in the film on July 22. There was no free air beneath the diaphragm. On July 20, a barium enema was interpreted as being within normal limits. On July 20, an upper GI series showed a normal esophagus and stomach with the pylorus opening readily admitting barium to the duodenum, which showed no evidence of disease. Progress films showed the stomach to empty readily. There were many loops of small bowel, namely jejunum, in the midportion of the abdomen which were markedly dilated and contained ingested Gastrografin. The dilated loops of small bowel apparently indicated the presence of an incomplete bowel obstruction. On July 26, an exploratory laporatomy was done and a thickened area in the jejunum was found. It was in the jejunum that there was at least partial intestinal obstruction. An 11 cm segment of jejunum was removed. An end-to-end jejunal anastomosis was performed.

Following this peritonitis developed and on July 27, a laporatomy was done. A site of perforation in the jejunum was found in an avascular area of necrosis. This site of necrosis was 15-20 cm away from the original end-to-end anastomosis, which was intact. The site of perforation was in an area denuded of serosa at the time of surgery on July 26. This area was excised and an end-to-end anastomosis was reformed. However, the patient continued to run a down hill course and expired the following day.

Medical Self-Help Program

The Medical Self-Help program, which has been in use in South Carolina for some time, has been endorsed recently by Gov. Robert E. McNair, by State Health Officer Dr. E. Kenneth Aycock, and Cyril B. Busbee, state superintendent of education.

"Medical self-help is a program designed to prepare each citizen to meet his own emergency health needs . . . when no doctor is available. At least one member of every family should be trained in this basic emergency health education program," the governor urged.

According to Mr. Busbee, approximately 60,000 citizens have received this training, and he maintains that promotion of Medical Self-Help training should be considered in all secondary schools in South Carolina.

The program was developed by the U. S. Public Health Service in cooperation with the American Medical Association's Council on National Security, its Committee on Disaster Medical Care and the Office of Civil Defense. Each local health department is responsible for the promotion and coordination of the program within its area of service, according to Dr. Aycock.

George Dean Johnson, M. D., President

REPORTS

OF

COMMITTEES

Annual Report of the Executive Committee South Carolina State Board of Health

submitted by

W. R. Wallace, M. D., Chairman

(Calendar year 1966)

It was with deep regret that the Executive Committee received the resignation of Dr. G. S. T. Peeples as state health officer because of health reasons at its October meeting. Dr. Peeples had been state health officer since 1954 and had served the State Board of Health with dedication since 1926. He will continue as consultant.

Governor Robert E. McNair appointed Dr. E. Kenneth Aycock the new state health officer. Dr. Aycock received the M. D. degree from the Medical College of South Carolina and the M. P. H. degree from Harvard University. He is a Fellow in the American Academy of Pediatrics, has been part-time director of the State Board of Health's Child Evaluation Clinic, assistant director of the Maternal and Child Health Division, and director of the Charleston County Health Department. The Executive Committee feels that the future of public health in the State is in capable and well-qualified hands.

The year 1966 is notable in that not a single case of poliomyelitis was reported—for the first year since weekly morbidity reports were begun in 1925. The successful use of the poliomyelitis vaccine has reduced this disease from periodic outbreaks of more than 300 cases per year to this level of no cases.

According to reports received, other diseases that did not occur at all or at a low incidence in 1966 were brucellosis, malaria, meningococcal meningitis, and rabies in animals. Diseases brought under control largely by effective immunizing agents are diphtheria, whooping cough, and tetanus. The importance of continued surveillance of the incidence of communicable diseases is emphasized by 22 cases of diphtheria that occurred an an inadequately immunized population group in the city of Columbia from July to September. To combat complacency of parents and to maintain a high level of immunity in the child population, the State Board of Health is conducting a birth certificate follow-up campaign whereby parents are encouraged to have their babies given immunizations by their family physician or local health department. The introduction of an effective measles vaccine this year should make this disease a rare one in the near future.

The 11 state-aid cancer clinics, approved by the American College of Surgeons are providing out-patient and in-patient diagnostic, treatment, and follow-up services to over 7,000 indigent persons afflicted with cancer. Approximately 17% of the total female population in South Carolina, age 20 and over, had cytological examination for genital cancer during 1966. The value of this procedure is reflected in the greater number of cases of *in situ* cancer seen in both private and clinic female patients. The technique of mammography for the earlier detection of breast cancer has shown an increase in number and results.

The long-line services provided in cooperation with the S. C. Heart Association are expanding and are becoming more refined. Another heart clinic will be opened in the Greenwood County Health Department in February, 1967, and this will bring the number of heart clinics in operation to eight. Several studies relative to cardiovascular disease are being pursued.

The Section of Tuberculosis Control of the S. C. State Board of Health requests that members of the S. C. Medical Association individually and collectively promote the prevention of tuberculosis in infants, children, and adults through (1) the routine use of tuberculin testing in their private and service patients with a follow-up chest x-ray film of all reactors; (2) the promotion of an annual chest x-ray examination of teachers and other personnel in all schools, including nursery schools and institutions of higher learning; and (3) semi-annual chest x-ray examination of all medical (THAT MEANS US), nursing and administrative personnel and other employees of hospitals, nursing and boarding homes.

The maximum security facility for recalcitrant persons with active tuberculosis at the S. C. Tuberculosis Sanatorium is a positive factor in the goal of tuberculosis eradication.

Infectious syphilis remains a serious threat to the health of the people of the State. An alarmingly high percentage (57%) of the 897 cases of infectious syphilis reported occurred among teenagers and young adults, ages 15 to 24 years. Three-fourths of the total reported syphilis is in the early stages, indicating the effectiveness of control.

Several areas reported outbreaks of infectious syphilis, and in each case a team of epidemiologists was deployed to prevent an epidemic. A total of 105,052 people received some type of venereal disease education, with efforts being concentrated in reaching public health workers through in-service education and teenagers through the public school systems.

The Governor appointed the State Board of Health as the certifying, consultative, and coordinating agency for Title XVIII (Medicare) of the Social Security Act. Sixty-four of the State's 109 hospitals and 49 of the State's 89 nursing homes have been certified as providers of services in the Medicare program. The State Board of Health qualified to provide home health services through its 46 county health departments, and 30 counties have become fully eligible to participate in the program. Hospital, nursing home, and medical ancillary personnel were instructed in the functions and requirements of Medicare in 32 workshops by the State Board of Health.

Dr. John C. Hawk, Vice-President

The Hill-Burton allocation to South Carolina for the current fiscal year is $5,696,789. and these funds were distributed to eligible sponsors in January, 1967, in accordance with the provisions of the State Plan approved by the U. S. Public Health Service on October 13, 1966. All of the allocation of $851,383 for the construction of community mental health centers and all of the allocation of $251,426 for the construction of specialized facilities for the mentally retarded have been claimed in accordance with the approved State Plan. During the year after inspections licenses were issued to 85 nursing homes, 5 institutional nursing infirmaries, 91 hospitals, 5 specialized hospitals, and 7 institutional general infirmaries.

Health and Water Annexes to the Plan for Emergency Management of Resources, which contain policy, guidance, functions, organization, and actions to provide health and water resources to meet essential needs following a nuclear attack, were completed for 11 counties in cooperation with the State Civil Defense Agency. The medical self-help program has accelerated, with 27,169 citizens receiving this training. Two series of lessons were presented on the Educational Television Network. South Carolina maintains forty 200-bed packaged disaster hospitals which provide 8,000 emergency beds. One seminar on community disaster emergency preparedness was held in Union.

Prenatal, postnatal, family planning, and child health medical clinics are conducted with follow-up services by public health nurses in every county in the State. The necessary medical supplies and equipment are furnished, and local physicians who serve as clinicians are paid a fee. Papanicolaou smears are required on all prenatal and family planning patients, with positive smears being followed by further diagnostic procedures. When a definite diagnosis has been established, eligible patients are accepted on the cancer program.

Maternity and infant care projects in Greenville and Charleston Counties, financed with 75% federal and 25% local funds, provide comprehensive medical and hospital care for maternity patients who have or are likely to have conditions which are hazardous to themselves or their infants. Provisions include appropriate care and follow-up services up to one year of age for premature infants and those with birth defects or other conditions of high risk. Blood screening tests on newborn infants for phenylketonuria are provided. In consultation with private physicians, nutritionists on the staff provide direct services to families regarding diets for these cases, and funds are available to purchase special dietary products for young infants when the family is unable to do so.

A two-week course in "Health of the School-Aged Child" was arranged and financed for the nurses employed by local school districts under Public Law 89-10 for work with children from low income families. Assistance was provided in the orientation of teachers working throughout the State in the "Head Start" programs by participating with the University of South Carolina and Morris College. Local health departments supported Project "Head Start" by coordinating, supplementing, or rendering health services.

Two special projects for migrant workers, financed by federal funds, are operating in Charleston and Beaufort Counties.

During the year 84 children who were mentally retarded or showed deviations in their mental growth and development were evaluated at the Child Evaluation Clinic, and reports were sent to referring physicians. Dental services for these children have been added.

Accidents, still the leading cause of deaths in the young age group up to 35, demand attention, and three full-time workers in Spartanburg, Anderson, and Charleston carried out promotional and educational endeavors directed toward safety, accident prevention, and poison prevention. A one-week course in "Principles and Application of Accidental Injury Control" was sponsored in cooperation with the Medical College of South Carolina for 33 local health department employees. Two poison control centers continue to serve the entire State.

Served on the crippled children's program were 5,400 patients, with 1,243 new cases being registered, 908 patients receiving 13,300 days of hospitalization and 97 patients receiving 10,896 convalescent home days of care. Seen in the Cystic Fibrosis Clinic for diagnostic evaluation were 46 children, with limited hospitalization, physical therapy, drugs, and mist equipment being provided to certain patients. Public health nurses from over the State attended a Cystic Fibrosis Seminar held in Charleston. An improved physician fee schedule was adopted, and it is expected that the cost of surgery will more than triple. Due to the cost of the new fees for surgery, together with the great rise in hospital *per diem* rates, funds may be exhausted before the end of the current fiscal year. Therefore, the program will probably be faced with curtailment in certain areas, most likely curtailment of hospitalization.

Dr. Ben Miller, Secretary

Cooperation was given a group from the Eastman Clinic, Rochester, N. Y., in conducting a dental research project in the communities of Manning, Dillon, and Lake City which is part of a large program attempting to determine more effective ways for preventing dental decay. A study was conducted of the dental needs of the 2600 patients in nursing homes in the State, and an oral cytology program for the early detection of cancer by the private dental practitioners was started. Topical fluoride treatments were provided to over 11,000 children, and 2,568 children received corrective services. About 81,000 school children in the first through sixth grades in about 279 elementary schools saw the "Little Jack" Puppet Show. Two additional water systems were fluoridated, bringing the total to 31.

For the last 20 years, national standards for community public health staffs have required one physician per 50,000 population, one nurse per 5,000, and one sanitarian for each 15,000 merely to provide a minimally adequate health service. In 1966 South Carolina's county health departments had positions budgeted for only the following percentages of the minimally adequate staff to serve the 1960 population: physicians 53%, sanitarians 72%, and nurses 45%. The ten lowest counties in adequacy of basic health personnel are Richland, Horry, Williamsburg, Cherokee, Greenville, York, Georgetown, Laurens, Sumter, and Union—all with 50% or less of the standard number. The ten counties with public health staff closest to the per capita standards are Allendale, Calhoun, Jasper, Greenwood, Abbeville, Bamberg, Charleston, Edgefield, Hampton, and Lee.

The existing and increasing preponderance of the chronic diseases as causes of death, disease, and disability has intensified the need for the categories of staff with which the county health departments are least well provided—nurses and physicians. Changes in the practice of medicine are focusing attention on the urgent need for further development of home health services to assist physicians in caring for homebound patients. Primary emphasis during 1966 was placed in development of these ancillary services which include part-time skilled nursing care, physical therapy, speech therapy, occupational therapy, medical social service, and home health aide service. All of the county health departments now have skilled nursing care available to help practicing physicians, although limited in quantity, and 30 of the 46 now have at least one other home health service available.

Seventy-five public health nurses have had preparation in team nursing which was begun in order that the nurse with more education and experience in public health might guide and assist others in the giving of nursing care.

One one-hour educational television tape for training food service personnel (restaurant workers) has been made. The Aedes aegypti eradication program project was made ineffective for a two-month period by a court case seeking an injunction against airplane spraying in the program. The project contract grant has been renewed, and the program will be extended into other areas of the State. A grant of $35,000 has been received to make a survey of the solid wastes problem in South Carolina.

Septic tanks in multiple installations have been and still are one of the biggest problems in the field of environmental sanitation, as the septic tank was designed for use in very rural areas.

In order to insure that the people of the State obtain safe and potable water from public water systems, the Sanitary Engineering Division reviewed and approved plans and specifications for 100 public schools, 30 hospitals and nursing homes, 29 state buildings, 44 public water supplies, and reviewed reports of 1,500 bacteriological and chemical analyses with follow-up collection of samples for further analyses where desirable. It reviewed engineering plans for the construction of community water and sewage facilities for 162 subdivisions, reviewed plans for 72 swimming pools, and made 199 inspections of oyster plants. There is a strong liaison between the Sanitary Engineering Division and the Pollution Control Authority.

Dr. Howard Stokes, Treasurer

South Carolina's industrial boom has intensified a need for a new division of the State Board of Health to specialize in the prevention and treatment of industrial diseases.

Laboratory services have expanded since moving into the new building. Services are now being provided in the area of chemical work dealing with foods and water. Expansion in this field of environmental health is represented by the performance of approximately 2,500 more tests during the last half of 1966 than in the first half. Expansion has also occurred in pollution studies.

The work of the Bacteriology and Immunology Section of the Laboratory which includes cultures for Salmonella typhi and other enteric pathogens, for staphylococcal and streptococcal and other infectious agents of potential epidemic significance, and for the identification of organisms in cultures referred by other laboratories has increased by more than one-third with regard to enteric pathogens alone. Special equipment for more efficient techniques and earlier evaluation of culture results are now available in the Tuberculosis Section, which shows more than a 30% increase in tests. A special section with suitable equipment is now available for the diagnosis and investigation of fungus diseases. Of special interest was the isolation of ECHO 9 from seven stool specimens and one spinal fluid obtained from seven patients in three counties. Also of notable interest is the current ability of the Laboratory to carry out serological tests for the diagnosis of rubella infection, necessarily limited by the supply of testing material to cases of pregnancy or infection in the newborn. Animal heads examined numbered 512, including 15 bats, all of which yielded negative results for rabies. Tests in the Serology Section have increased 12% to a total of more than 341,000 during the year. Current information on tests available for the diagnosis of syphilis and current evaluation on these tests are made available to physicians. Also an important activity is the intrastate evaluation program in which 35 laboratories are currently enrolled, with this Laboratory serving as a reference laboratory and a participant in the testing program currently available from the Communicable Disease Center. Routine PKU testing of newborn babies is now undertaken. (The Guthrie test is the one now currently recommended but is not proving to be a highly satisfactory test to administer.)

The series of weekly half-hour television programs on health and safety, produced in cooperation with the Educational Television Center and shown over four open-channel stations in the State, was continued.

Fifty-seven persons were arrested during the year on charges of violation of drug laws (42 for violation of the Narcotic Act, 6 for violation of the Dangerous Drugs Act, and 9 for forgery or alteration of prescriptions). Two Class 4 Narcotic Tax Stamps were surrendered due to narcotic addiction.

The 1966 births estimated* as of March 1, 1967, 50,461—a decrease of 1,988 or 3.79 percent. 1966 deaths estimated* as of March 1, 1967, 21,831—an increase of 572 or 2.69 percent.

The State Board of Health's concern as regards Medicare and Medicaid (Titles XVIII and XIX of the Social Security Act) appears in the April issue of the *South Carolina Medical Journal page 124.*

Dr. Norman Eaddy, President-Elect

Committee on the Medical Aspects of Sports

The Committee on the Medical Aspects of Sports, acting as a subcommittee of the Committee on Co-operative Activities of the South Carolina Medical Association, was organized during the fall of 1966. Your chairman was appointed by the Committee on Co-operative Activities for a period of 3 years. In turn the chairman appointed to his committee the following persons: J. S. Garrison, M. D., Johnston; J. L. Hughes, M. D., Lancaster—(3 years); W. R. Henderson, M. D., Spartanburg; R. M. Knight, M. D., Greenville; C. C. Wannamaker, M. D., N. Charleston—(2 years); L. M. Stephens, M. D., Clinton; C. T. Weston, M. D., Columbia—(1 year).

The first committee meeting was held at the Clemson House Hotel, Clemson, S. C. on October 27, 1966. In attendance was the entire committee plus invited advisers, Coach Phil Clark of Greer High School, the past president of the South Carolina High School Coaches Association, and Mr. Mike Blouin representing Dr. Warren Giese, Head of the Department of Physical Education of the University of South Carolina. The major topic of discussion was the formulation of plans to continue annual conferences on the Medical Aspects of Sports as started by our Association's Committee on Athletic Injuries in 1965. In addition to this area of work it was considered desirable that the committee stimulate interest and involvement of our membership in the area of high school athletics both through this proposed conference and possibly through the use of speakers on these subjects at our annual meetings in the future.

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*Estimates of records for 1966 are based on the percentage of increase or degree over or under the number of records recorded through Dec., 1966, compared to the same period in 1965 with the percentage of increase or decrease applied to the number of belated records filed through April 15, 1966 for 1965 events.

From the discussion and suggestions of the committee members and with the co-operation of Dr. Giese at the University of South Carolina has evolved a conference on the Medical Aspect of Sports to be presented on March 16, 1967 at the Columbia Hotel in Columbia, South Carolina. Presentation of this conference is sponsored by our Association with the co-operation of the South Carolina Coaches Association and the South Carolina High School League. It was decided by the committee that it would be desirable to rotate this meeting between the 3 major areas of the state, using the facilities of the state universities in these areas; the first conference being in Columbia, using the facilities of the University of South Carolina. The second and third will be at Clemson University and The Citadel, using their facilities. The program for this conference on sports medicine has been mailed to all members of the South Carolina Medical Association and from the response to date it promises to be quite successful, both from high school coach and physician attendance.

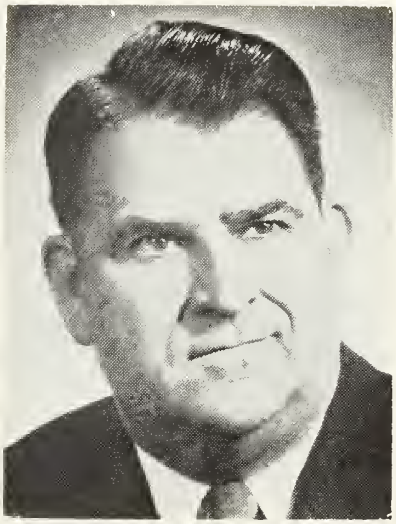
In addition to the initiation of this conference the committee also formulated a statement of opinion concerning the nature of the work of the team physicians. It was the general consensus of the committee that the same doctor should be the team physician at all times for any one high school in order that he might get to know the participants and become more familiar with medical situations which might arise in the sports concern. He would also then be in a better position to advise the coach and school authorities on medical matters other than simply treating injuries after they occur. The committee also felt a responsibility to supply information to physicians as requested and where high schools lacked the services of a team physician it was suggested that the local medical society should get a list of those interested in this area of medicine and assign them to a specific school. Those so appointed should be backed not only by the local society but the state society and this committee. This method of assignment, it was hoped, would help to avoid misunderstandings with colleagues.

The last area of discussion by this committee was that of future topics for the conferences on sports medicine. Among those suggested are:

1) Telemetry as related to sports medicine,
2) Neurological injuries,
3) Research in the field of athletic medicine, and
4) Discussions of what the examiner should look for when doing a pre-season medical examination for sports participants.

Other suggestions from the association membership or those attending the conference will of course be appreciated.

A short committee meeting will be held in conjunction with the conference on March 16, 1967. This will be for the purpose of constructive criticism of this year's program and of formulating plans for next year's program. Judson E. Hair, M. D., Chairman



Dr. Joseph P. Cain
Delegate to AMA

Committee on Cooperative Activities

The General Committee on Cooperative Activities with the following members:

Dr. Robert S. Solomon
Dr. William S. Cantey
Dr. Vince Moseley
Dr. William T. Hendrix
Dr. C. Benton Burns
Dr. Judson E. Hair

This is a new committee and has the following subcommittees:

Advisory Committee to the Department of Public Welfare
Committee on Alcoholism and Drug Addiction
Committee on Religion and Medicine
Advisory Committee to Vocational Rehabilitation
Committee on Injuries in Athletics
Committee on Medical Education Foundation
Committee on Cancer
Advisory Committee to the Woman's Auxiliary
Advisory Committee to Crippled Children's Society
Committee on Liaison with Allied Professions
Committee on Eye Bank
Committee on Liaison with Nursing Education

An organizational meeting was held in Columbia July 1966. The members of the standing committee and the Chairmen of the sub-committees were present. An effort was made to set up a rotating system for each sub-committee so there can be a continuity of purpose.

Each sub-committee chairman has been most cooperative and there have been several conferences sponsored by these committees that have received state-wide publicity. You will be reading of the activities of these committees in the Journal in the near future. Incidentally two conferences sponsored by our sub-committees will take place during March, namely Conference on Medical Aspect of Sports March 16th and Conference on Religion and Medicine, Columbia, March.

I will represent South Carolina at the National Conference on Rural Health, Charlotte, N. C. March 9th to 11th.

I believe our Sub-Committees have done an outstanding job and I hope our committees may remain virtually intact for another year so we can continue some of the work started this year.

Harold P. Hope, M. D., Chairman

Advisory Committee to the Department of Public Welfare

During the year there has been no need for activity of the Advisory Committee to the Department of Public Welfare, therefore no meeting was called.

Clay W. Evatt, M. D., Chairman

Public Relations

The Committee was reorganized early this year. There has been little specific activity. An attempt was made to organize a fall meeting of the statewide President's Public Relations Committee, but because of lack of interest the plan was abandoned.

The usual winter meeting of County Health Officers was organized and scheduled for March 19. These meetings have been increasingly important, and a good attendance is anticipated for the 1967 session.

The chairman has served on a Committee of the South Carolina Hospital Association.

Public Information

During the past year the Committee has continued to supply to the major newspapers of the state a series of weekly articles on medical subjects of interest to the public. The articles run regularly in The News & Courier, sporadically in the Columbia, Greenville, Spartanburg and Greenwood papers, and occasionally elsewhere.

Judging from comments, the committee believes that these articles are read to advantage by the public and serve a useful purpose in disseminating information and possibly improving the image of the profession in South Carolina.

As time passes, subjects become more difficult to find without duplication. The Committee would be greatly assisted by receiving articles from the general membership.

Continuation of this activity is recommended.

Joseph I. Waring, M. D., Chairman

Advisory Committee to the Crippled Children Society

This committee continues to serve when occasion arises. During the past year it has been able to give some assistance to the Society.

Its annual meeting will be held at the time of the Annual Meeting of the Association.

Joseph I. Waring, M. D., Chairman

Dr. Joel Wyman
Alternate Delegate to AMA

SCMA Committee on Historical Medicine

During the past year a second volume on the History of Medicine in South Carolina covering the period from 1825 to 1900 has been completed and is now in the press.

The Committee has recommended that this volume be made available to the membership at a reduced price ($3.25 postpaid). The amounts appropriated by the Association are not at present sufficient to cover the expenses of production, and while the Association has agreed to underwrite the costs if necessary, it is thought that low priced sale to the members who want to have the book would be a fairer distribution. The book will sell in the shops for $7.75.

The Committee proposes to continue the account in a third and last volume. It is still vitally concerned with knowledge of any matters of historical interest for the preservation of the story of medicine in South Carolina.

Joseph I. Waring, M. D., Chairman

The Mediation Committee

The Mediation Committee of the South Carolina Medical Association has held three meetings since the House of Delegates adjourned at the State Medical Association Meeting in 1966. A final meeting is scheduled March 22, 1967 with representatives from the various state groups to give further study of Medicare fee schedule.

The first of these meetings was an organizational meeting held on May 12, 1966 immediately after adjournment of the House of Delegates. Officers were elected and the meeting adjourned.

The second meeting of the Mediation Committee was held on July 13, 1966. A separate meeting of the Mediation Committee was held and then a joint meeting with representatives from the various medical groups of the state to consider Medicare charges was held. At this joint meeting, the specific problems of Medicare were discussed and a temporary program set up to be reconsidered and studied at a later date after more information was available.

The Mediation Committee met again on January 11, 1967 and considered cases and other business at that time.

During the meetings of the Mediation Committee as stated above, six cases were studied and adjudicated. In addition to this, as stated above, the Mediation Committee met with a joint committee to serve in an advisory capacity to the Blue Shield on Medicare fees. The second meeting to study the results of the temporary program is to be held on March 22, 1967.

James L. Wells, Chairman

Maternal Mortality

The report of this committee appears among the scientific articles in this number of the Journal.

E. J. Dennis, M. D., Chairman

AMA-ERF

The following report from the AMA-ERF is hereby submitted. During the period of June 1966 through December 31, 1966, contributions were as follows:

Physicians	$3,720.80
Women's Auxiliaries	4,670.30

Note that records of contributions are much slower coming in this year and this report gives no real clue as to what the total will be. A final report will be submitted to the President of the South Carolina Medical Association at the conclusion of this fiscal year.

B. M. Montgomery, M. D., Chairman

Advisory Committee to Vocational Rehabilitation Agency

The committee system of the South Carolina Medical Association was changed by vote of the House of Delegates May, 1966. In implementing this action of the House of Delegates, Council assigned the Advisory Committee to Vocational Rehabilitation Agency to the overall Committee on Cooperative Activities. This is the first report of the Advisory Committee to Vocational Rehabilitation and deserves a brief background note for clarification.

Organized Vocational Rehabilitation services began in South Carolina in 1927. Statutory provisions were added in 1943 to allow for the physical restoration phase of rehabilitation. With the advent of this addition, the Executive Committee of the State Board of Health plus appointees by the South Carolina Medical Association formed a committee for Vocational Rehabilitation, mainly for setting up a fee schedule.

As the scope of activities in the rehabilitation field expanded, an independent State Agency was formed in 1957, separate from the original plan as a part of the Department of Education.

A working Advisory Committee to Vocational Rehabilitation Agency was organized in 1958, and since that time has given valuable service to the agency in the physical restoration field. It has been the feeling of the SCMA and the Agency that this Advisory Committee should be a part of the committee system of the state society and the provision was made for this by the House of Delegates and the Council during the past year.

Dr. Thomas Parker
Alternate Delegate to AMA

The Committee met June 2, 1966 in Columbia with good representation and good participation by the committee. Members of the Agency Staff, including the Director, Dr. Dill D. Beckman, met with the committee as information sources. The major portion of the committee's time dealt with upgrading the fee schedule in light of recent concepts in medical payments to doctors.

The committee adopted a relative fee schedule in 1958 and this had been the basis for payment for medical services over the past seven years.

At the June, 1966 meeting the committee voted to increase the surgical schedule by 20% (twenty per cent) with the consensus of the committee that the Agency should endeavor to change the concept of payment to doctors to the "Usual, Customary, and Reasonable Fee" concept within a three year period. It was also voted to make certain adjustments to non-surgical specialists. All of the above adjustments in fees were to be reconciled into the budgetary structure of the Agency.

The second meeting of the Medical Advisory Committee was held on February 23, 1967 in Columbia. The committee showed its interest in the work of the Agency in that the meeting was well attended and participated in by all the members present. This meeting was concerned principally in rehabilitation facilities. An excellent film was reviewed, which emphasized Case Work, requiring physical restoration services as relates to special facilities. The Director, Dr. Dill D. Beckman, outlined to the committee a plan for an extended medical facility in the Columbia area which could take over patients after they could be moved from a general hospital. Dr. Beckman further indicated the Agency's interest in operation of the Alcoholic Center at Florence.

The Committee had the opportunity of reviewing a brochure supplied by Mrs. Emily Pierce, Public Information Assistant. This brochure was approved for distribution to the medical profession, explaining activities of the Agency.

The Committee finds itself in accord with the Agency's activities and accomplishments. It is felt that the Committee affords an excellent liaison between the SCMA and the Agency and that definite services are afforded the Agency through this committee.

Ben N. Miller, M. D., Chairman

Infant and Child Health

The Infant and Child Health Committee met in the J. Marion Sims Building, Columbia, South Carolina the latter part of September, 1966.

The committee at that time decided to attempt a study concerning congenital anomalies in the newborn. This study did not materialize because of difficulty in persuading overworked physicians to contribute time for such a project. We hope this project may yet materialize.

Dr. Willard B. Mills accepted the appointment as head of the sub-committee on School Health and is actively engaged in making his committee productive.

Casper E. Wiggins, M. D., Chairman

Benevolence Fund Report — 1966

Balance January 1, 1966		$2,352.50
Receipts:		
Appropriated by S. C. Medical Association	$1,200.00	
Aiken County Auxiliary	100.00	
Anderson County Auxiliary	15.00	
Barnwell County Auxiliary	15.13	
Charleston County Auxiliary	80.00	
Columbia Auxiliary	50.00	
Greenville County Auxiliary	100.00	
Greenwood-Abbeville Auxiliary	10.00	
Horry County Auxiliary	5.00	
Lancaster County Auxiliary	10.00	
Newberry County Auxiliary	5.00	
Oconee County Auxiliary	5.00	
Orangeburg County Auxiliary	10.00	
Pee Dee Auxiliary	100.00	
Spartanburg County Auxiliary	25.00	
York County Auxiliary	25.00	
Sumter-Clarendon Auxiliary	10.00	
Mrs. H. B. Morgan	10.00	
Dr. Daniel W. Ellis (Memorial Dr. T. H. Martin)	5.00	
Total		$1,780.13
Disbursements:		$4,132.63
Recipient Number 1	800.00	
Recipient Number 2	600.00	1,400.00
Total		$2,732.63
Balance January 1, 1967		

Thos. C. Goldsmith, M. D., Chairman

Dr. William Perry
Chairman of Council

Sub-Committee on Alcohol and Drug Addiction

The original meeting of the Sub-Committee on Alcoholism and Drug Addiction was held during the past year.

The participating members are: Robert S. Solomon, Chairman; Joseph Marshall, Vice-Chairman; Donald Duerk, Secretary; Harold Moody; Hunter Rentz; William Perry.

A general discussion was held, led by Dr. Marshall, concerning appropriate function in the field of purview of the group. The general proposed activities of the Committee were outlined, and its participation with allied public health interests, as well as organized medical groups, was emphasized.

Mr. Jerry McCord, Director of the South Carolina Commission on Alcoholism addressed the group outlining present trends, functions and future directions of the Governor's Commission on Alcoholsim.

Committees were appointed to investigate the treatment program and its relationship to other services such as Vocational Rehabilitation, Mental Health, etc.

Dr. Marshall suggested that our Committee acquaint local physicians with the available facilities for the treatment of the acute and chronic alcoholic and establish liaison with component societies to encourage a broadening of treatment facilities in our general hospitals for not only the alcoholic but the drug addict.

The Committee voted to co-sponsor the Institute on "Modern Trends in Handling the Alcoholic Offender" in cooperation with the University of South Carolina School of Law, and Dr. Hunter Rentz coordinated the medical aspects of this Institute with the overall Institute program as it had already been planned.

It was recommended that a draft be given to the Insurance Commission recommending liberalization of insurance policies to permit more realistic consideration of the acutely toxic alcoholic for general admission and hospital care. Dr. Rentz was asked to draft a proposal to the Blue Cross-Blue Shield Corporation recommending that the acute alcoholic be covered under Blue Cross coverage.

The entire Committee felt that they had gotten off to a sound beginning after much delay in organizing and that if allowed to continue in the next year, that continued progress could be made in realistically facing the ever growing problem of alcoholism and drug addiction.

Robert S. Solomon, M. D., Chairman

Committee on Industrial Medicine

Although the report appearing in the Journal last year stated that there was little of interest to report from this Committee, it soon became apparent that the converse was true. Dissatisfaction was voiced by members of the association and very specifically by Dr. Harold Jervey with the present Industrial Fee Schedule. Dr. Jervey as consultant to the Industrial Commission was having considerable trouble with the doctors over the state because of an obviously outdated schedule both from the standpoint of fees and procedures listed. In fact there has not been a complete reversion of the schedule since 1950. A partial reversion was made in 1963; but this left many fees the same as 1950.

At the first meeting of the Committee Dr. Harold Jervey appeared and made recommendations from his point of view as consultant to the Industrial Commission. He stressed the need for a more complete listing of procedures and fees more realistic with the time. After considerable consideration, thought, and study the Committee decided to adopt a relative value type schedule. The relative value schedule adopted was the Physicians Service Index. This is a relative value schedule in which all known procedures are listed and kept up to date as new procedures evolve and come into use. All the specialty societies and other groups were invited to appear before the Committee and give their recommendations. One whole day was taken up in these hearings and all groups were represented except one or two.

Using those recommendations the Committee completed a schedule and adopted a conversion factor of 5. As near as the Committee could determine this would render a fee as good as and in some cases better than a usual and customary fee.

Along with the new fee schedule the Committee is making other recommendations to the Industrial Commission. Namely the Committee feels that there should be closer liaison with the Industrial Commission; that there should be provision for annual reversion of the fee schedule; and, that the consultant to the Industrial Commission in turn have a body of consultants representing all specialties and groups.

I would like to thank all of those who have given of their time in appearing before the Committee. I would also like to give recognition to the Committee as a whole for all their time and advice in getting up this schedule.

J. H. Jameson, M. D., Chairman

Eye Bank Committee

The South Carolina Eye Bank was organized under the guidance of the South Carolina Society of Ophthalmology and Oto-laryngology in June 1957. After a lot of hard work and much traveling about to learn how other successful eye banks were operated and gathering of material from New York to New Orleans, enough information was obtained for a working basis. This group of civic-minded laymen and medical men drew up bylaws of operation and general plans of "setup". Lions International of South Carolina decided to sponsor this worthwhile project. The Eye Bank of our sister state of North Carolina was of inestimable help to us.

Since our bank was organized it has not only furnished a real need for our own state, but all across the United States of America, our country has learned that South Carolina is keeping abreast of the advancement of medicine, and also across the Atlantic Ocean. We of the South Carolina Eye Bank are very proud of our accomplishments, but plans for doing greater work for our needy people are in operation.

We offer a statistical report gotten up by our able executive secretary, Mrs. Adelaide Neidhardt.

On April 15, 1966, the South Carolina Eye Bank employed its first full-time Executive Secretary. Another first is the office space donated to the Eye Bank by the South Carolina Baptist Hospital.

Since April, 1966, interest in the work of the Eye Bank has grown tremendously. Lions Clubs in the state have increased their financial support. The requests for speakers to present Eye Bank programs have greatly increased.

In the Fall of 1966, an Eye Bank Speakers Bureau was organized made up of past district governors of Lions International. These men are eager to present Eye Bank programs to any interested civic, medical, church or school groups.

Statistics:

Eye Donors (March 3, 1967)	5,903
Increase since this date last year	1,451
Eyes Handled since January 1, 1966	
Total	48
From South Carolina donors	28
From other Eye Banks	20
Transplant Operations	37
Preservation & Research	11

John H. Young, M. D., Chairman

The Religion and Medicine Committee

The following activities are reported by the Religion and Medicine Committee of the South Carolina Medical Association, formally organized in the winter of 1966.

(1) The Committee has met approximately every

two months and discussed various activities related to county organization, local programs, and regional and statewide program.

(2) A regional program was presented in Florence in October, 1966, as a symposium on the topic "How Much Should The Patient Be Told". Participating in the program were Dr. Milford Rouse, President-elect of the American Medical Association; Bishop Gray Temple, Episcopal Bishop of South Carolina; Mr. James Rogers, Editor of "The Florence Morning News"; and Mr. Leroy Want, attorney from Darlington. Physicians, ministers, and para medical personnel attended a very successful program.

(3) A similar seminar to the above was presented in Columbia on May 30, 1966. The same topic and format was used to provide a successful seminar, well attended by physicians, ministers, and para medical personnel.

(4) Chairman of the committee attended a National meeting of State Chairmen sponsored by the AMA Committee on Religion and Medicine held in Chicago, February, 1967. At this meeting a report was presented of the activities of the various states. Likewise, plans for future meetings and projects were discussed and plans for furthering activities of the committee on a State and County wide basis were emphasized.

(5) At the request of this committee, the Program Committee of South Carolina Medical Association included a talk on Religion and Medicine at the Annual Scientific Session in Myrtle Beach, May 8, 1967. This years' speaker will be Dr. Milford Rouse, President-elect of the American Medical Association.

(6) A regional program on Religion and Medicine is planned for the Greenville-Spartanburg area for the fall of 1967.

N. B. Baroody, M. D., Chairman

Committee on Constitution and By-Laws

This committee met several times during the year and in compliance with the request of several individuals considered the advisability of increasing the number of members of Council. After discussion and consideration of this matter, it was the consensus of your committee that such a recommendation be made to the S. C. Medical Association and in order for this to be accomplished, the following recommendations are made.

PROPOSED CHANGES IN THE CONSTITUTION OF THE S. C. MEDICAL ASSOCIATION

ARTICLE VI

Change the first statement to read, "The Council shall consist of two Councilors from different counties from each of the medical districts of the state, ..."

(This at present reads, "The Council shall consist of one Councilor from each of the medical districts of the state, ...")

ARTICLE IX

Section 1

Change the last part of this section to read " . . . , and two Councilors from each of the medical districts in the State."

(This at present reads, ". . . , and one Councilor from each of the medical districts in the state.")

Section 4

Change the entire section to read, "Councilors shall be elected to a term of four years, but no Councilor shall serve for more than two full consecutive terms.

(This section at present reads, "Councilors shall be elected for a term of three years, but no Councilor shall serve for more than three consecutive terms.")

PROPOSED CHANGES IN THE BY-LAWS OF THE S. C. MEDICAL ASSOCIATION

Chapter VIII

Section 15 Mediation Committee

Change the first three sentences to read, "The Mediation Committee shall be composed of twelve members, two from each medical district of the Association. These shall be elected by the House of Delegates from a slate of twenty-four (24) members submitted by Council, such list to include two members from each medical district but no two members from any one county. The terms of these members shall be four years and shall coincide with the terms of the Councilors from the corresponding districts.

(This reads at present, "The mediation committee shall be composed of nine members, one from each medical district of the Association. These shall be elected by the House of Delegates from a slate of eighteen (18) members submitted by Council, usch list to include two members from each medical district, but no two members from any one county. The terms of these members shall be three years and shall coincide with the terms of the Councilors from the corresponding districts.)

CHAPTER XI DISTRICTS

This will be changed from the present nine medical districts which coincide with the nine Judicial Districts of 1840 to coincide with the six Congressional Districts of 1966.

DISTRICT 1: Allendale, Beaufort, Berkeley, Charleston, Clarendon, Colleton, Dorchester, Hampton, and Jasper.

DISTRICT 2: Bamberg, Barnwell, Calhoun, Lexington, Orangeburg, and Richmond.

DISTRICT 3: Abbeville, Aiken, Anderson, Pickens, Oconee, Greenwood, McCormick, Newberry, Saluda, Edgefield.

DISTRICT 4: Greenville, Spartanburg, Laurens.

DISTRICT 5: Cherokee, Chester, Chesterfield, Fairfield, Kershaw, Lancaster, Sumter, Union, and York.

DISTRICT 6: Darlington, Dillon, Florence, Georgetown, Horry, Lee, Marion, Marlboro, and Williamsburg.

The full 1/4 grain of phenobarb in the formula
takes the nervous edge off the pain
...helps bring out the best in codeine

Phenaphen® with Codeine

the only leading compound analgesic that calms instead of caffeinates

Each capsule contains:

Phenobarbital (¼ gr.)	16.2 mg.
(Warning: may be habit forming)	
Aspirin (2½ gr.)	162.0 mg.
Phenacetin (3 gr.)	194.0 mg.
Hyoscyamine sulfate	0.031 mg.
Codeine phosphate	¼ gr. (No. 2), ½ gr. (No. 3), 1 gr. (No. 4)
(Warning: may be habit forming)	

Contraindications: Hypersensitivity to any ingredient.

Precautions: As with all phenacetin-containing products, avoid excessive or prolonged use.

Side Effects: Side effects are uncommon—nausea, constipation, and drowsiness have been reported.

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A. H. ROBINS CO., INC., Richmond, Va. 23220

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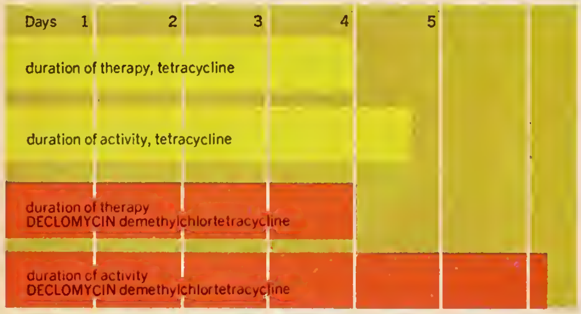
DECLOMYCIN®
DEMETHYLCHLORTETRACYCLINE

produces 1-2 "extra" days' activity



1-2 "extra" days' activity
after the last dose to protect against relapse

one 300 mg tablet b.i.d.
or
one 150 mg capsule q.i.d.

Effective in a wide range of everyday infections—respiratory, urinary tract and others—in the young and aged—the acutely or chronically ill—when the offending organisms are tetracycline-sensitive.

Contraindication—History of hypersensitivity to demethylchlortetracycline.

Warning—In renal impairment, usual doses may lead to excessive systemic accumulation and liver toxicity. Under such conditions, lower than usual doses are indicated and, if therapy is prolonged, serum level determinations may be advisable. A photodynamic reaction to natural or artificial sunlight has been observed. Small amounts of drug and short exposure may produce an exaggerated sunburn reaction which may range from erythema to severe skin manifestations. In a smaller proportion, photoallergic reactions have been reported. Patients should avoid direct exposure to sunlight and discontinue drug at the first evidence of skin discomfort.

Precautions and Side Effects—Overgrowth of nonsusceptible organisms may occur. Constant observation is essential. If new infections appear, appropriate measures should be taken. Use of demethylchlortetracycline during tooth development (last trimester of pregnancy, neonatal period and early childhood) may cause discoloration of the teeth (yellow-grey-brownish). This effect occurs mostly during long-term use but has also been observed in short treatment courses. In infants, increased intracranial pressure with bulging fontanels has been observed. All signs and symptoms have disappeared rapidly upon cessation of treatment. Side reactions include glossitis, stomatitis, proctitis, nausea, diarrhea, vaginitis and dermatitis. If adverse reaction or idiosyncrasy occurs, discontinue medication and institute appropriate therapy. Anaphylactoid reactions have been reported.

Average Adult Daily Dosage: 150 mg q.i.d. or 300 mg b.i.d. Should be given 1 hour before or 2 hours after meals, since absorption is impaired by the concomitant administration of high calcium content drugs, foods and some dairy products.

Capsules: 150 mg; *Tablets:* film coated, 300 mg, 150 mg, and 75 mg of demethylchlortetracycline HCl.

LEDERLE LABORATORIES, A Division of American Cyanamid Company, Pearl River, New York
419-6—4075

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After anorectal surgery...

METAMUCIL®

brand of psyllium hydrophilic mucilloid

- **Reduces painful strain...**

  The soft, easily propelled bulk created by Metamucil allows comfortable elimination with a minimum of effort and irritation.

- **Softens stools...**

  Metamucil absorbs water and creates a soft, pliant fecal mass which is demulcent to mucosal surfaces.

- **Relieves irritation...**

  Metamucil provides "smoothage" to prevent the formation of scybalous concretions and to lessen painful tenesmus.

- **Encourages healing...**

  Softening of the colonic content with Metamucil allays abrasive pressure and congestion at denuded postsurgical sites.

- **And in nonsurgical conditions...**

  Metamucil minimizes both the pressure of strain on perineal structures and the physical irritation of hard masses on local lesions.

Usual Adult Dosage:

One rounded teaspoonful of Metamucil powder in a glass of cool liquid, or one packet of Instant Mix Metamucil in a glass of water. An additional glass of liquid is helpful.

Metamucil powder contains equal amounts of refined, purified psyllium and dextrose furnishing 14 calories and a negligible amount of sodium in each dose; available in containers of 4, 8 and 16 ounces.

Instant Mix Metamucil furnishes 3 calories and 0.25 Gm. of sodium in each dose; available in cartons of 16 and 30 single-dose packets.

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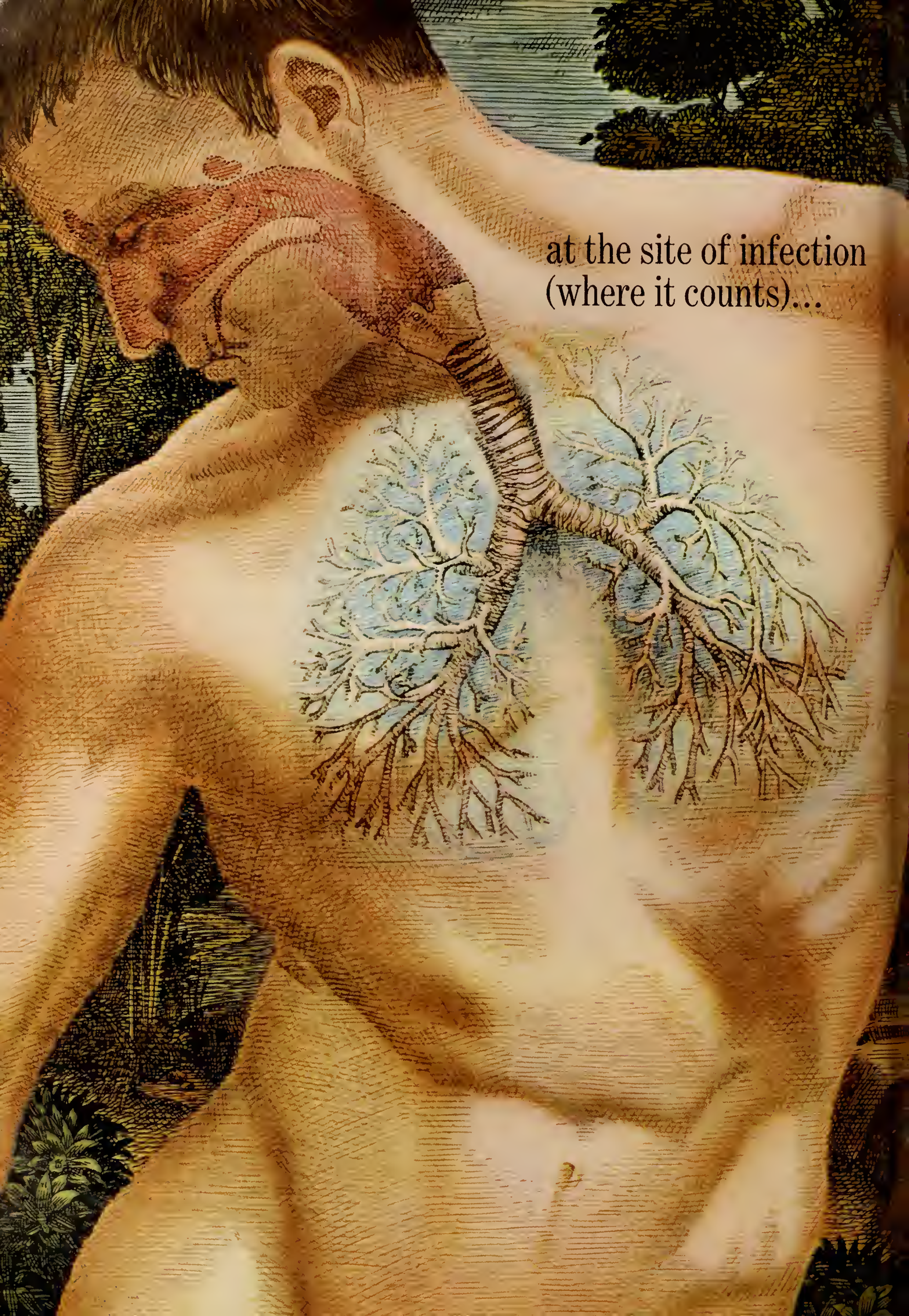
Chicago, Illinois 60680


at the site of infection
(where it counts)...

Ilosone® provides more antibacterial activity than any other oral erythromycin

Acid stable, better absorbed . . . Ilosone produces faster, higher, more prolonged blood levels, even in the presence of food[1-3]

Because it is the most active form of oral erythromycin, Ilosone can help assure consistently greater antibacterial activity at the site of infection. Ilosone produces peak antibacterial blood levels two to four times those of other erythromycin preparations.[1,2] Not only are these levels attained earlier, but they are maintained for much longer periods. Even the presence of food does not seem to affect the activity of Ilosone.[1,3]

In the treatment of patients with bacterial infections susceptible to erythromycin, Ilosone has compiled an excellent therapeutic record. Since it exerts its greatest activity against gram-positive organisms, it is particularly useful in common respiratory and soft-tissue bacterial infections. Ilosone kills—not merely inhibits—streptococci, pneumococci, and more strains of staphylococci than any other macrolide antibiotic. This bactericidal action, coupled with the high antibacterial levels attained, makes Ilosone especially valuable in patients with low host resistance, such as infants, debilitated individuals, and diabetics.

Ilosone has shown no cross-resistance with penicillin and may be effective against organisms that have become resistant to that agent. Despite its high antibacterial activity, Ilosone has demonstrated a low incidence of side reactions. Blood dyscrasias, ototoxicity, and tooth staining have not been observed. Infrequent cases of drug idiosyncrasy, manifested by a cholestatic jaundice, have occurred, but there have been no known definite residual effects.

700121

Ilosone®

Lilly

Erythromycin Estolate

(See next page for prescribing information.)

Ilosone®/ the most active oral form of erythromycin

Description: Ilosone is the most active form of oral erythromycin that has been developed. Because it is stable in acid, well absorbed, and excreted in lesser amounts in the bile, it provides faster, higher, and longer-lasting levels of antibacterial activity (ABA) in the serum, even when taken with food, than do comparable doses of erythromycin.

Indications: Ilosone is indicated in infections caused by microorganisms sensitive to its action (especially staphylococci, hemolytic streptococci, and pneumococci). The drug is therefore useful in a high proportion of bacterial diseases encountered in clinical practice and particularly in the treatment of bacterial infections of the upper and lower respiratory tract and soft tissues.

In the treatment of acute bacterial pharyngitis and tonsillitis, this antibiotic has promptly eradicated the bacteria (streptococci) and has produced a parallel prompt clinical improvement. There have been no group A beta-hemolytic streptococci resistant to this preparation. In beta-hemolytic streptococcus infections, treatment should be maintained for ten days to prevent the development of rheumatic fever or glomerulonephritis.

Erythromycin estolate has proved to be very effective in pneumococcus pneumonia and in acute bronchitis with pneumococci on culture. Bronchopneumonia and otitis media in children have responded well to its use.

The antibiotic has been used very successfully in staphylococcus infections. Good therapeutic results have been obtained in soft-tissue infections, abscesses, cellulitis, carbuncles, wound infections, and furunculosis.

In serious staphylococcus infections, erythromycin preparations should be used only in combination therapy with other antimicrobial agents. As is the case with any treatment regimen used in these severe conditions, surgical procedures should be performed when indicated, and large dosages of the antimicrobial agents should be employed. In this fashion, Ilosone has been effective in staphylococcus pneumonia, osteomyelitis, septicemia, empyema, and meningitis.

Multiple 500-mg. doses of the drug have been useful in gonorrhea and syphilis. Since penicillin is the drug of choice for the treatment of syphilis and gonorrhea, erythromycin estolate should be employed for these infections only in patients with a history of penicillin allergy. Also, other infections due to susceptible bacteria in patients known to be hypersensitive to penicillin or other antibiotics may be considered for treatment with Ilosone.

Contraindications: Ilosone is contraindicated in patients with a known history of sensitivity to this drug and in those with preexisting liver disease or dysfunction.

Side-Effects: Data obtained from seven years' use of propionyl erythromycin ester and erythromycin estolate (Ilosone) indicate that hepatic dysfunction with or without clinical jaundice may occur during or following courses of therapy with the drug.

Changes in liver function tests in such cases have been indicative of intrahepatic cholestasis. The symptoms appear to be the result of a form of sensitization. The initial symptoms have appeared in some cases after a few days of treatment but generally have followed one or two weeks of continuous therapy or several courses of the drug. Symptoms reappear promptly if the drug is readministered to sensitive patients, usually within forty-eight hours. Eosinophilia was noted in peripheral blood counts. The findings readily subsided without apparent residual effects when treatment was discontinued. Recovery was delayed in one reported instance. The physician indicated in this case that either drug-induced jaundice or viral hepatitis may have been responsible for the findings.

In one clinical study involving ninety-three patients treated with the antibiotic, three cases of jaundice were observed and an additional eleven cases developed some changes in liver function tests. Three of the patients had abnormal liver function tests a second time on readministration of the drug.

Even though it is assumed that not all cases of jaundice have been reported, it seems clear that the number is small compared with the amount of drug that has been used. Reported cases have included persons in whom there had been administered other drugs known to be associated at times with hepatic side-effects and cases in which the presence of viral hepatitis or other disease may have been responsible for the findings. In some of the cases, associated gastro-intestinal symptoms simulated the colic of biliary tract disease. In other instances, clinical symptoms and results of liver function tests resembled findings in extrahepatic obstructive jaundice. It appears that the occurrence of jaundice after administration of Ilosone is infrequent, but further investigations are being made to estimate its incidence more accurately.

In those cases mentioned above in which jaundice appeared to be definitely related to use of the drug, laboratory findings were characterized by increased direct-reacting bilirubin, elevated alkaline phosphatase levels, negative or weakly positive cephalin flocculation and thymol turbidity tests, elevated serum glutamic oxalacetic transaminase levels, peripheral eosinophilia, and normal cholecystograms.

Individual idiosyncrasy seems evident since jaundice has not been reported in other patients taking prolonged courses of the medication. Patients with chronic infection have been given 1 to 2 Gm. of the drug daily for periods of two to six months, and patients with rheumatic fever have taken prophylactic doses of 0.5 Gm. daily for two years without difficulty. In one group of 144 patients who received the drug daily for two years, no jaundice was noted. It was of interest that members of six of these patients' families, who were not taking the drug, had episodes of jaundice during the study period.

Transaminase and serum alkaline phosphatase levels were determined in a group of fifty-four adults and children who took 250 mg. of Ilosone daily for an average of sixteen months as rheumatic fever prophylaxis. The results were compared with those of a similar group of forty-four patients who received penicillin. There were no cases of jaundice in either group. Elevation of SGPT and serum alkaline phosphatase levels during the course of treatment was observed in one patient treated with Ilosone and in two patients treated with penicillin. Seven other patients in the group receiving Ilosone and four others in the penicillin group showed elevations in one of the tests at some time during administration of the drugs.

Very satisfactory therapeutic results, without toxicity, were reported in 102 pediatric patients who received short-term (ten-day) courses of Ilosone in the treatment of streptococcus infections. Results of liver function tests in these patients were comparable to those in a similar control group who had received penicillin.

Gastro-intestinal disturbances not associated with hepatic effects are observed in a small proportion of individuals as a result of a local stimulating effect of the medication on the alimentary tract; however, the normal intestinal gram-negative bacterial flora is not appreciably altered by erythromycin drugs.

Although allergic manifestations are uncommon with the use of erythromycin, there have been occasional reports of urticaria, skin eruptions, and, on rare occasions, anaphylaxis.

Administration and Dosage: Ilosone is administered orally.

Ilosone Pulvules®
Ilosone Chewable Tablets
Ilosone Drops
Ilosone, 125, for Oral Suspension

For infants and for children under twenty-five pounds of body weight, the usual dosage is 5 mg. per pound every six hours; for children twenty-five to fifty pounds, 125 mg. every six hours. (Tablets Ilosone Chewable should be chewed or crushed and swallowed with water.)

For adults and for children over fifty pounds, the usual dosage of Ilosone is 250 mg. every six hours.

For severe infections, these dosages may be doubled.

When larger doses are indicated, parenteral erythromycin therapy should be considered.

In the treatment of syphilis, the recommended total dosage is 20 to 30 Gm. given in divided doses for a period of ten to fifteen days. Close follow-up of the patient is necessary since erythromycin drugs have not had adequate evaluation in all stages of syphilis. Examinations of spinal fluid are recommended as part of the follow-up therapy.

For gonorrhea, 500 mg. four times a day for four days are recommended. In the treatment of gonorrhea, patients with a suspected lesion of syphilis should have a dark-field examination before receiving antibiotics, and monthly serologic tests should be made for a period of three months.

How Supplied: Pulvules Ilosone, Capsules, N.F., 125 and 250 mg. (equivalent to base), in bottles of 24 and 100.

Tablets Ilosone Chewable, N.F., 125 mg. (equivalent to base) in bottles of 50.

Ilosone Drops, 5 mg. (equivalent to base) per drop, in 10-cc.-size packages, with dropper calibrated at 25 and 50 mg.

Ilosone, 125, for Oral Suspension, N.F., 125 mg. (equivalent to base) per 5-cc. teaspoonful, in 60 and 150-cc.-size packages.

References: 1. Griffith, R. S., and Black, H. R.: Am. J. M. Sc., 247:69, 1964. 2. Griffith, R. S., and Black, H. R.: Antibiotics & Chemother., 12:398, 1962. 3. Hirsch, H. A., Pryles, C. V., and Finland, M.: Am. J. M. Sc., 239:198, 1960.

Additional information available to physicians upon request.
Eli Lilly and Company, Indianapolis, Indiana 46206.

Lilly

700121

ENABLING RESOLUTION

In amending the Constitution and By-laws of the S.C.M.A. to change the Medical Districts from nine in number with one Councilor each to six in number with two Councilors each, the following method will be used. The election to be held in 1968.

District Number	*Seat Number*	*Year Term Expires*
1	1	1969
1	2	1971
2	3	1970
2	4	1972
3	5	1969
3	6	1971
4	7	1970
4	8	1972
5	9	1969
5	10	1971
6	11	1970
6	12	1972

No Councilor may be elected to a seat that will carry his term of office beyond 10 consecutive years.

NOTE: In this manner in future elections there will be three Councilors elected each year. Each Medical District will elect a Councilor every other year. In the election of 1968, seats number 1, 5, and 9 will be elected for one year; seats number 3, 7, and 11 will be elected for two years; seats number 2, 6, and 10 will be elected for three years; seats number 4, 8, and 12 will be elected for four years.

It is the belief of our committee that the above Enabling Resolution can be explained readily to the Reference Committee and particular attention has been paid to allow for the continuation of the present Councilors in order that continuity of this organization not be disrupted.

The chairman would like to thank the members of this committee this year and last year for their excellent support and would particularly like to express appreciation to our esteemed past president, Dr. Julian Price, and our ever available executive secretary, M. L. Meadors, for their invaluable contributions to the work of this committee.

Joseph D. Thomas, M. D., Chairman

Legislative Committee

Report on the meeting of the Legislative Committee of South Carolina Medical Association, held in Columbia on Friday, December 16, 1966 at 5:00 P. M.

Members present were: Dr. Joseph Cain of Mullins, Temporary Chairman; Dr. Luke Laffittee of Allendale; Dr. Hugh Wells of Seneca; Dr. Michael Patton of Spartanburg; Dr. Strother Pope of Columbia; Dr. Donald G. Kilgore, Jr. of Greenville; and Mr. M. L. Meadors, the Executive Secretary of the Association. Dr. Harold Pettit of Charleston was not present.

As the first order of business, Dr. Donald Kilgore was elected Chairman of the Committee.

The next order of business was a discussion of the organization of the Committee. Dr. Cain pointed out that to achieve maximum effectiveness, it would be necessary to have a list of key men who know and could contact every member of the General Assembly. It was decided that the members of the Committee were to assume responsibility for those members of the Legislature from their own county, and the Chairman was to obtain a list of the President and Secretary of each society from the Executive Secretary, in order that key men could be established in counties not represented by membership on the Legislative Committee.

The osteopathic situation was discussed at great length. It was felt that since the Governor's committee appointed to study the present status of Osteopathy had not made its report, it would be best to defer any action until this report had been made. This would be a substantial reason for opposing any change in the Osteopathy laws of South Carolina at the present time.

The Executive Secretary mentioned that implementation of Title XIX of the Medicare Law by South Carolina would probably be made sometime this year. A special Committee of the Medical Association under the leadership of Dr. Frank Owens is studying this matter at the present time. The Committee felt that it should wait until Dr. Owens submitted its report to the Committee before taking any action.

Dr. Strother Pope mentioned that he had high hopes for a passage of a Coroner-Medical Examiner Bill during this session of the Legislature. He stated that both Dr. Frank Owens and Dr. Bill Brockington, who are new Senators, have promised to try to push this bill through. The Committee promised its support to Dr. Pope in helping to get this bill passed.

A pending bill concerning re-inspection of automobiles in the State Legislature was discussed. It was felt that highway safety was a definite concern for every physician, and the Committee voted unanimously to favor this re-inspection law, and testify for it if necessary. The Committee also recommended to Council that a committee be appointed to study a possible eugenics law, along with modernization of the present abortion laws in South Carolina.

There have been no formal meetings of the Committee since the meeting in December. However, the Chairman has kept in close contact with the officers of the Association concerning legislation. Most of the activity has concerned three bills on Osteopathy, which were reported out of the House Military, Public and Municipal Affairs Committee. H-1116 would allow osteopaths to dispense drugs, H-1117 would allow osteopaths the same practice privileges as physicians, and H-1118 would add an osteopath to the State Board of Medical Examiners and provide for their licensure from the same examination given the physicians. Obviously, these last two bills are in con-

Palmedico, Inc.

PALMEDICO invites you to visit our exhibit at space #7, featuring: AMPHAPLEX—the "DIFFERENT" anti-obesity product.

PALBAR—Antispasmodic-sedative.

PALMIRON. PALMIRON C, PALMIRON FORTE—our hematinic family—from which to "Pick the right iron."

Parke, Davis & Company

Medical service members of our staff will be in attendance at our booth to discuss important Parke-Davis specialties which will be on display.

Wm. P. Poythress & Co.

The Poythress exhibit will feature Trocinate, a unique, direct-acting (musculotropic) antispasmodic drug, and the Mudrane combinations, established Poythress products for relief of bronchial asthma. Solfoton, Solfo-Serpine, Panalgesic and Synirin will also be featured. Your requests for literature and professional trial quantities are cordially invited.

A. H. Robins Company

You are cordially invited to visit the Robins display and meet our representatives who will welcome the opportunity to discuss products of interest with you.

Sandoz Pharmaceuticals

Sandoz Pharmaceuticals cordially invites you to visit our display at booth #6, where we are featuring Mellaril, Sansert, Cafergot P-B., Fiorinal and Fiorinal with codeine.

Any of our representatives in attendance, will gladly answer questions about these and other Sandoz products.

Schering Corporation

Schering Corporation invites you to visit their exhibit, Booth Space No. 24 where their representatives will be available to discuss with you any questions you may have on ETRAFON(R), TINACTIN (R), GARAMYCIN(R), CELESTONE(R), SOLUSPAN(R), AFRIN(R) or any other Schering product.

Sealy of the Carolinas, Inc.

Sealy of the Carolinas, Incorporated will display the nationally advertised Standard and Princess Posturepedic Mattresses, over their matching foundations, at the convention of the South Carolina Medical Association. Standard Posturepedic, the original of the so called "orthopedic" types of bedding, is recommended for backache due to sleeping on too soft a mattress. Princess Posturepedic "with which one pampers oneself", has the same inner firmness, but is considerably softer to the touch, being insulated with layers of polyurethane foam. With these two products, Sealy offers the "choice of comfort", Extra-Firm Standard Posturepedic, Gently-Firm Princess Posturepedic.

G. D. Searle & Co.

You are cordially invited to visit the Searle booth where our representatives will be happy to answer any questions regarding Searle Products of Research.

Featured will be Ovulen for ovulation control and menstrual disturbances, and Flagyl, a potent, new trichomonacidal agent for trichomonal vaginitis, cervicitis, urethritis and prostatitis.

Smith Kline & French Laboratories

Representatives will be on hand to answer your specific questions and provide information on their products and services.

Smith, Miller & Patch, Inc.

SMITH, MILLER & PATCH, INC. will appreciate the opportunity to discuss with you the latest clinical reports concerning LIPOFLAVONOID in vertigo associated with Meniere's disease and in dizziness in the older age group; VITRON-C, KONDREMUL and LIPOTRIAD; and ophthalmic products for conditions frequently encountered in General Practice, including VASOCON-A.

The Stuart Company

The Stuart Company exhibit at the S. C. Medical Association convention will feature the antacid Mylanta. Also on exhibit will be a laxative, Dialose Plus and a defoaming agent useful in the treatment of intestinal gas. The name of this product is Mylicon.

Syntex Laboratories, Inc.

SYNALAR® (fluocinolone acetonide), the topical corticosteroid designed to meet specific dermatologic needs, will be featured at Booth 40. SYNALAR has set a new standard of success in the treatment of a wide range of inflammatory dermatoses.

A warm invitation is extended to all physicians attending this meeting to visit our booth and discuss the latest developments from SYNTEX research.

NORINYL® (norethindrone 2.0 mg with mestranol 0.1 mg) Tablets, an original steroid from SYNTEX LABORATORIES, will be featured at Booth 40. NORINYL provides multiple contraceptive action that has produced a record of 100% effectiveness.

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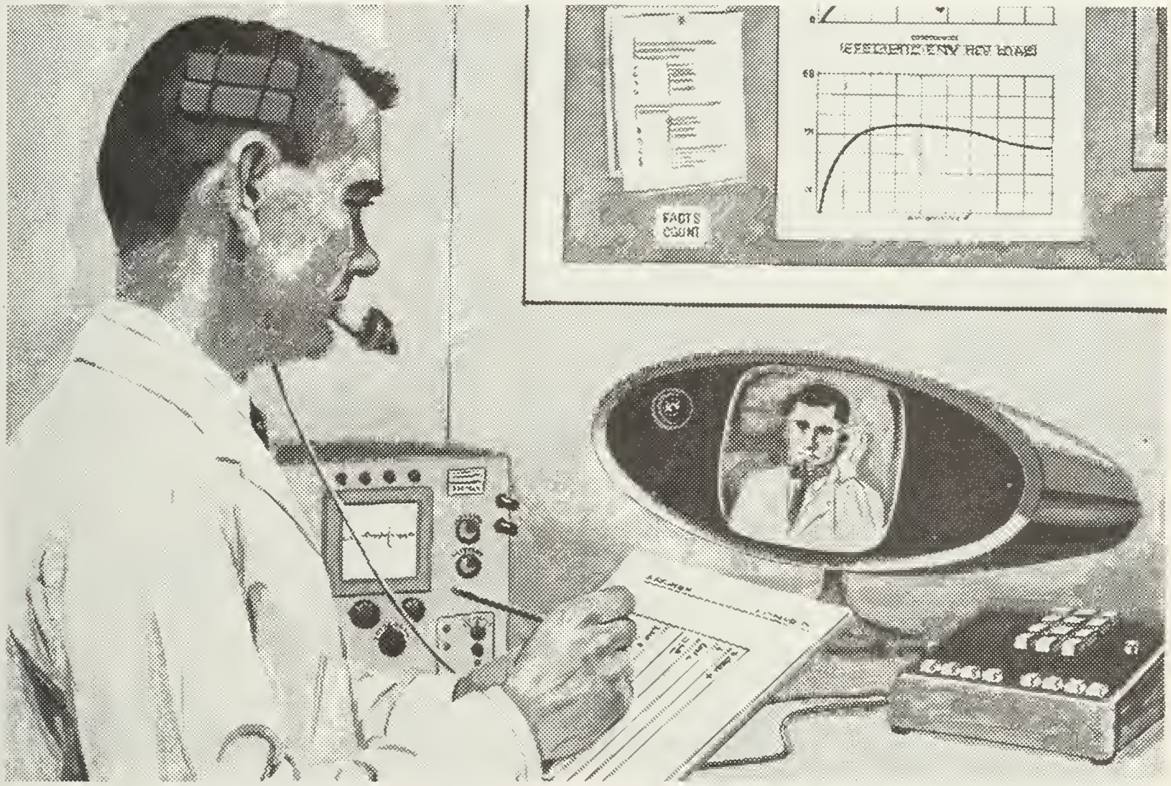

facts count, too, in selecting health care coverage

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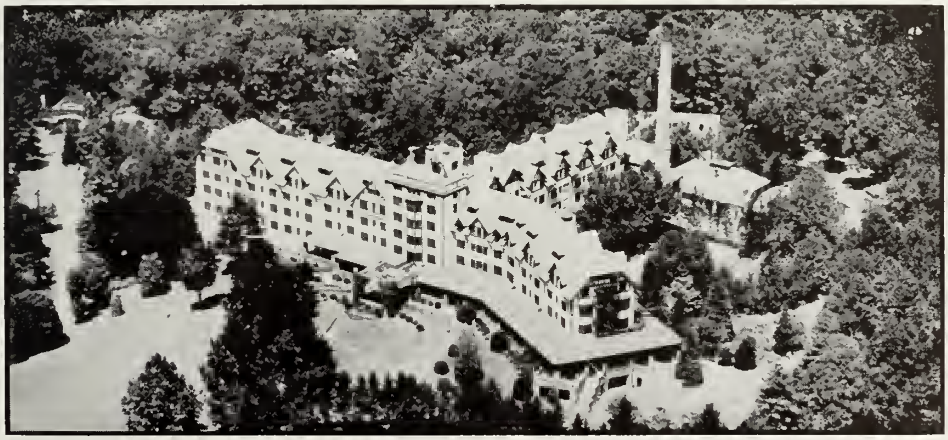

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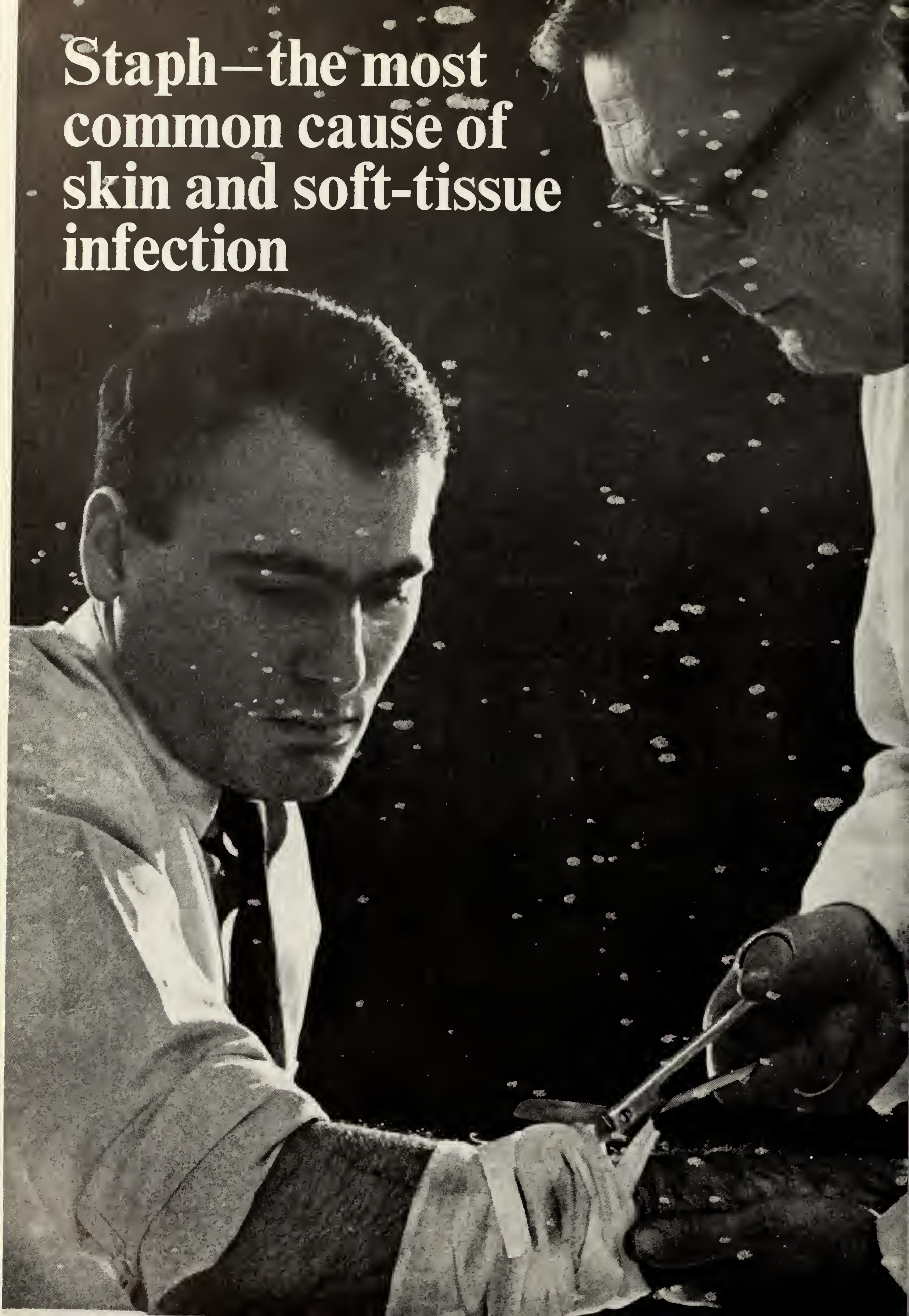
Staph—the most common cause of skin and soft-tissue infection



reliably controlled with specific therapy

A suitable dosage form for every staph situation

Staph—the most common cause of skin and soft-tissue infection—also is responsible for many more serious infections, such as pneumonia, osteomyelitis, and septicemia. Often, a seemingly minor skin infection is the source of metastatic spread to deeper structures. When findings on culture incriminate staph as the cause, Prostaphlin (sodium oxacillin) will provide specific effective therapy.

Bactericidal effectiveness. Hardly a staph organism can resist the bactericidal action of Prostaphlin (sodium oxacillin), as shown by a 34-month *in vitro* study. Of all staph isolates tested, 99.5% were sensitive to oxacillin.[1]

Clinically proven. There is a high correlation between these *in vitro* findings and clinical results. Of 610 patients treated with Prostaphlin (sodium oxacillin), 89.8% were reported cured or improved, including those with staph infections resistant to penicillin G.[2] And since resistance does not appear to develop *in vivo,* therapy with oxacillin can be extended when necessary.

Outstanding safety record. Besides being staph-specific and rapidly absorbed—Prostaphlin (sodium oxacillin) has established an outstanding record of safety during five years of widespread clinical use. Continuous high blood levels of oxacillin have not produced toxic effects on kidney function, assuring a significant margin of safety. However, as with all penicillins, the possibility of allergic response should be considered.

Capsules, Oral Solution and Injectable. Prostaphlin (sodium oxacillin) is available in three flexible dosage forms to suit the age of the patient and severity of infection—capsules, an oral solution for pediatric use, and multi-dose vials for injection, I.M. or I.V.

PRESCRIBING INFORMATION: For complete information, consult Official Package Circular. *Indications:* Infections caused by Staphylococci, particularly those due to penicillin G-resistant Staphylococci. *Contraindications:* A history of severe allergic reactions to penicillin. *Precautions:* Typical penicillin-allergic reactions may occur. Safety for use in pregnancy and premature infants is not established. Because of limited experience, use cautiously and evaluate organ system function frequently in neonates. Mycotic or bacterial superinfections may occur. Assess renal, hematopoietic and hepatic function intermittently during long-term therapy. *Adverse Reactions:* Skin rashes, pruritus, urticaria, eosinophilia, nausea, vomiting, diarrhea, fever and occasional anaphylaxis. Rare cases of reversible hepatocellular dysfunction have occurred. Moderate SGOT elevations have been noted. Thrombophlebitis has occurred occasionally during intravenous therapy and leukopenia was noted in two cases. *Usual Oral Dosage:* Adults: 500 mg. *q.*4 or *q.6h*. Children: 50 mg./Kg./day. *Usual Parenteral Dosage:* Adults: 250-500 mg. *q.*4 or *q.6h*. Children: 50 mg./Kg./day. Treat beta-hemolytic streptococcal infections for at least 10 days. Give oral drug 1 to 2 hours before meals. *Supplied:* Capsules—250 and 500 mg. in bottles of 48. Injectable—250 mg., 500 mg., and 1 Gm. dry filled vial for I.M./I.V. use. For Oral Solution—100 ml. bottle, 250 mg./5 ml. when reconstituted. **A.H.F.S. CATEGORY: 8:12.6**

References: 1. Abstracted from *Antibiotic Sensitivity of Staphylococci Studied from November 1962 through August 1965,* reported by Griffith, L.J., Staphylococcus Reference Laboratory, V.A. Hospital, Batavia, N.Y. 2. Data on file, Bristol Laboratories.

BRISTOL

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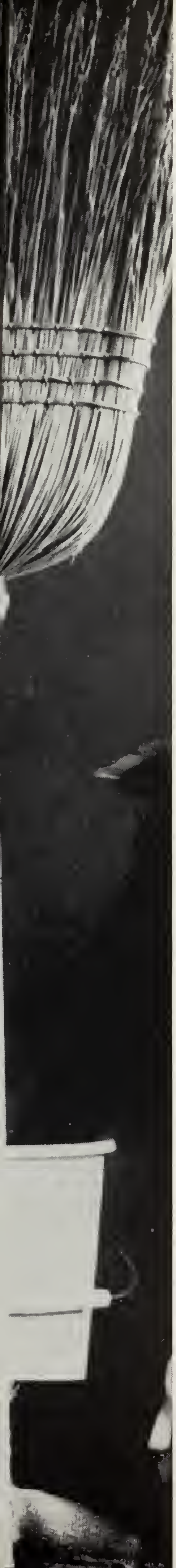

You can't set her free. But you can help her feel less anxious.

You know this woman.

She's anxious, tense, irritable. She's felt this way for months.

Beset by the seemingly insurmountable problems of raising a young family, and confined to the home most of the time, her symptoms reflect a sense of inadequacy and isolation. Your reassurance and guidance may have helped some, but not enough.

SERAX (oxazepam) cannot change her environment, of course. But it can help relieve anxiety, tension, agitation and irritability, thus strengthening her ability to cope with day-to-day problems. Eventually—as she regains confidence and composure—your counsel may be all the support she needs.

> Indicated in anxiety, tension, agitation, irritability, and anxiety associated with depression.
>
> May be used in a broad range of patients, generally with considerable dosage flexibility.

Contraindications: History of previous hypersensitivity to oxazepam. Oxazepam is not indicated in psychoses.

Precautions: Hypotensive reactions are rare, but use with caution where complications could ensue from a fall in blood pressure, especially in the elderly. One patient exhibiting drug dependency by taking a chronic overdose developed upon cessation questionable withdrawal symptoms. Carefully supervise dose and amounts prescribed, especially for patients prone to overdose; excessive prolonged use in susceptible patients (alcoholics, ex-addicts, etc.) may result in dependence or habituation. Reduce dosage gradually after prolonged excessive dosage to avoid possible epileptiform seizures. Caution patients against driving or operating machinery until absence of drowsiness or dizziness is ascertained. Warn patients of possible reduction in alcohol tolerance. Safety for use in pregnancy has not been established.

Not indicated in children under 6 years; absolute dosage for 6 to 12 year-olds not established.

Side Effects: Therapy-interrupting side effects are rare. Transient mild drowsiness is common initially; if persistent, reduce dosage. Dizziness, vertigo and headache have also occurred infrequently; syncope, rarely. Mild paradoxical reactions (excitement, stimulation of affect) are reported in psychiatric patients. Minor diffuse rashes (morbilliform, urticarial and maculopapular) are rare. Nausea, lethargy, edema, slurred speech, tremor and altered libido are rare and generally controllable by dosage reduction. Although rare, leukopenia and hepatic dysfunction including jaundice have been reported during therapy. Periodic blood counts and liver function tests are advised. Ataxia, reported rarely, does not appear related to dose or age.

These side reactions, noted with related compounds, are not yet reported: paradoxical excitation with severe rage reactions, hallucinations, menstrual irregularities, change in EEG pattern, blood dyscrasias (including agranulocytosis), blurred vision, diplopia, incontinence, stupor, disorientation, fever, euphoria and dysmetria.

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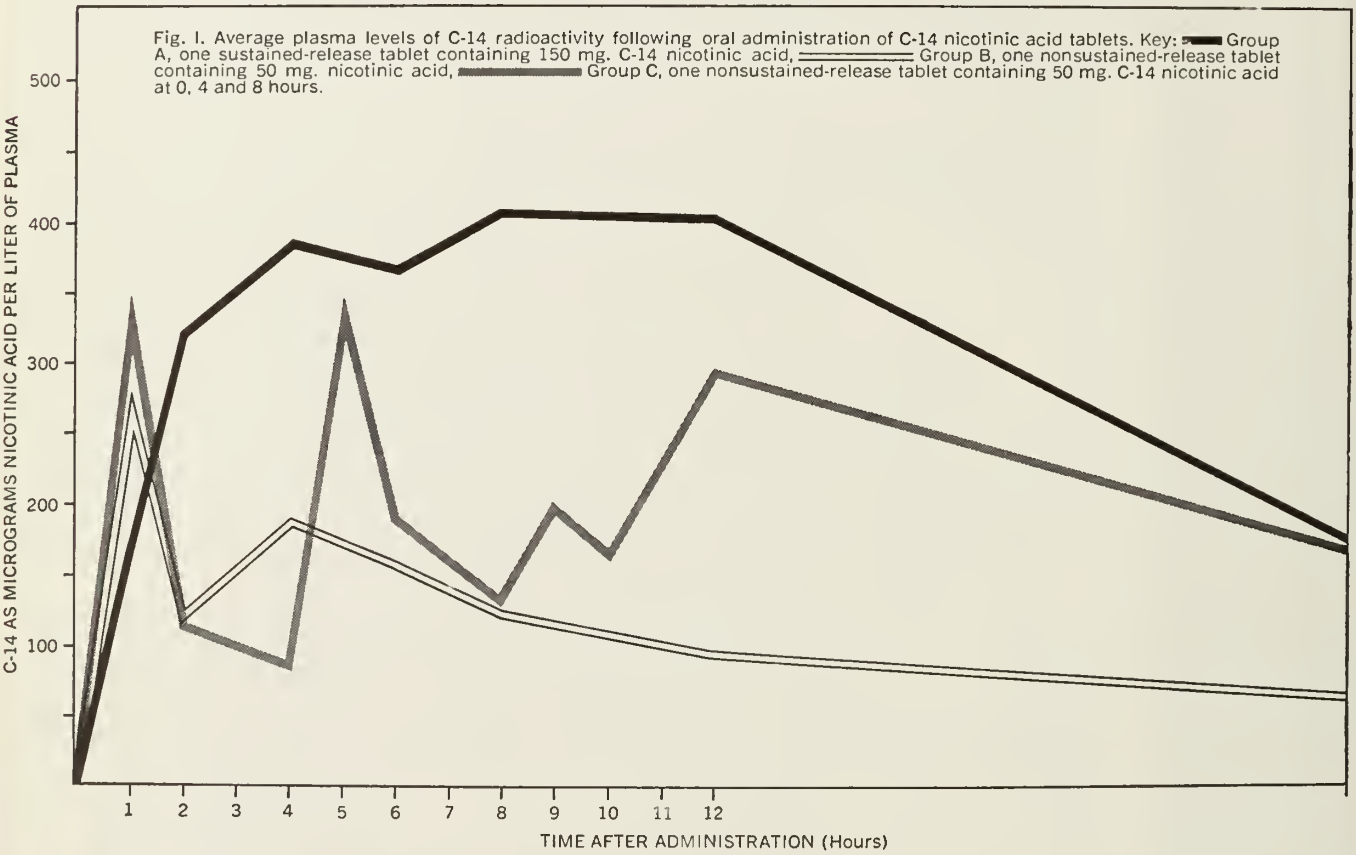

Fig. I. Average plasma levels of C-14 radioactivity following oral administration of C-14 nicotinic acid tablets. Key: ▬ Group A, one sustained-release tablet containing 150 mg. C-14 nicotinic acid, ═ Group B, one nonsustained-release tablet containing 50 mg. nicotinic acid, ━ Group C, one nonsustained-release tablet containing 50 mg. C-14 nicotinic acid at 0, 4 and 8 hours.

(fewer absent doses by absent-minded patients)

Human volunteer subjects were administered Geroniazol TT tablets with the nicotinic acid component made radioactive with C-14. Plasma and urine samples were analyzed. (See Figures I and II) The radioactive tracer study substantiated the previous clinical evidence that the release of nicotinic acid from the Geroniazol TT tablet produced a gradual rise in plasma levels to a plateau for a total of 12 hours and more.

Such proven sustained activity makes the management of geriatric patients much easier by minimizing the possibility of neglected doses through absent-mindedness or senile confusion. Therapy *can* be continuous on a daily dose of only one Geroniazol TT tablet every 12 hours.

The gradual release of nicotinic acid in Geroniazol TT will provide the well-known peripheral vasodilatation needed in patients with deficient circulation and with a minimum amount (if any) of "flushing." Also, cerebrovascular circulation is complemented by pentylenetetrazol, long-established as a cerebral and respiratory stimulant.

Geroniazol TT improves the typical, unfortunate, signs of senile confusion. Patients become more alert,

ged and debilitated

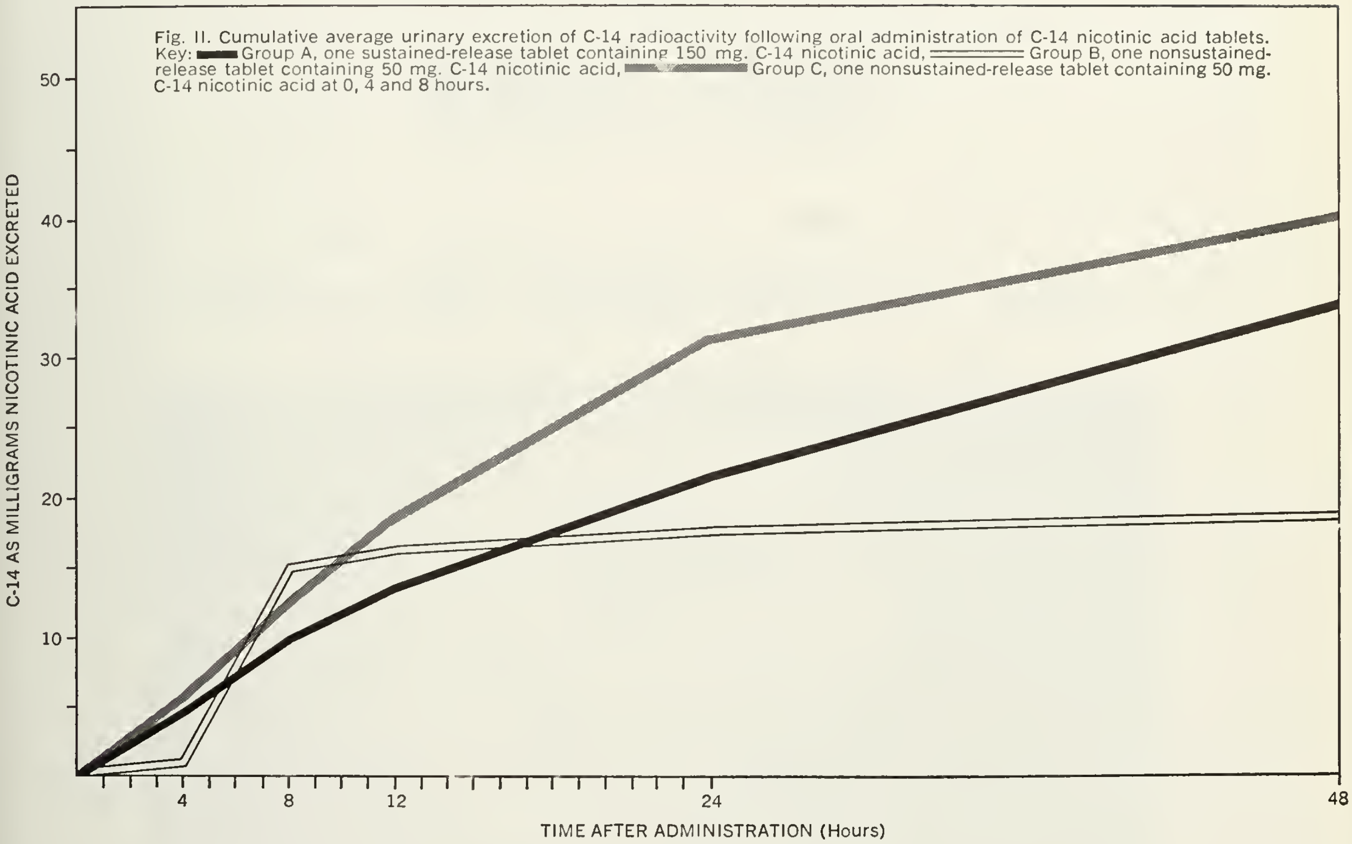

Fig. II. Cumulative average urinary excretion of C-14 radioactivity following oral administration of C-14 nicotinic acid tablets. Key: ▬ Group A, one sustained-release tablet containing 150 mg. C-14 nicotinic acid, ═ Group B, one nonsustained-release tablet containing 50 mg. C-14 nicotinic acid, ▬ Group C, one nonsustained-release tablet containing 50 mg. C-14 nicotinic acid at 0, 4 and 8 hours.

less confused and moody. Personal care, memory, emotional stability, social attention improve. Fatigue, apathy and irritability are reduced.

A prescription for 100 tablets of Geroniazol TT will permit your patients to enjoy the benefits of time-prolonged nicotinic acid/pentylenetetrazol therapy, at an economical price. Dosage is only one tablet every 12 hours.

Contraindications: There are no known contraindications.

Precautions: Exercise caution when treating patients with a low convulsive threshold.

Side Effects: Side effects are rarely encountered, however due to the vasodilatation effect of nicotinic acid, transitory mild nausea, flushing, tingling and pruritus are possible.

Dosage: One tablet every 12 hours.

Supplied: Prescribe bottles of 100 tablets, to take advantage of recent price reduction.

References: 1. Report by Nuclear Science & Engineering Corp., Pittsburgh, Pa., in files of Philips Roxane Laboratories. 2. Connolly, R.: W. Virginia Med. J. *56*:263 (Aug.) 1960. 3. Curran, T. R., and Phelps, D. K.: Am. Pract. & Digest Treat. *11*:617 (July) 1960.

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Why Wait?

*Based on Statistical Report, U.S. Dept. Commerce, ed. 86, and Fisher, G. F., and Vavra, H. M.: Pub. Health Rep. 80:961 (Nov.) 1965.

Note: DEXTROSTIX is not meant to replace the more precise analytical laboratory procedures such as needed in glucose tolerance testing.

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Or has she given in to the demoralizing impact of confinement, disability and dependency?

When functional fatigue complicates convalescence, Alertonic can help...

Pleasant-tasting Alertonic is pipradrol hydrochloride —an effective cerebral stimulant whose gentle analeptic action helps counteract the apathy and inertia that can often delay convalescence—together with an excellent vitamin and mineral formula, in a satisfying 15% alcohol vehicle.

Nothing fosters confidence and a sense of well-being better than your own personal warmth, understanding and encouragement together with Alertonic to help insure prompt response.

Adequate dosage is important: Prescribe Alertonic— one tablespoonful t.i.d., 30 minutes before meals...tastes best chilled.

And for your patient's sake, prescribe Alertonic in the convenient, economical one-pint bottle.

Alertonic®

Available Only On Prescription

Each 45 cc. (3 tablespoonfuls) contains: alcohol, 15%; pipradrol hydrochloride, 2 mg.; thiamine hydrochloride (vitamin B$_1$) (10 MDR*), 10 mg.; riboflavin (vitamin B$_2$) (4 MDR), 5 mg.; pyridoxine hydrochloride (vitamin B$_6$), 1 mg.; niacinamide (5 MDR), 50 mg.; choline,† 100 mg.; inositol,† 100 mg.; calcium glycerophosphate, 100 mg. (supplies 2% MDR for calcium and for phosphorus) and 1 mg. each of the following: cobalt (as chloride), manganese (as sulfate), magnesium (as acetate), zinc (as acetate), and molybdenum (as ammonium molybdate).

*Multiple of adult Minimum Daily Requirement supplied.
†The need for these substances in human nutrition has not been established.

Indications: 1. Functional fatigue such as that often associated with: a depressing life experience or stressful time of life; advancing years; convalescence; limited activity or confinement. 2. Poor appetite and vitamin-mineral deficiency as they occur in: patients having faulty eating habits; geriatric patients who are losing interest in food; patients convalescing from debilitating illness or surgery.

Dosage: Adults, 1 tablespoonful; children (over 15 years old), 1 to 2 teaspoonfuls; children (4 to 15 years old), 1 teaspoonful. To be taken three times daily 30 minutes before meals.

Contraindications: As with other drugs with CNS stimulating action, Alertonic is contraindicated in hyperactive, agitated or severely anxious patients and in chorea or obsessive compulsive states.

Side effects: Reports of overstimulation have been rare. Patients who are known to be unduly sensitive to the effects of stimulant drugs should be observed carefully in the initial stages of treatment.

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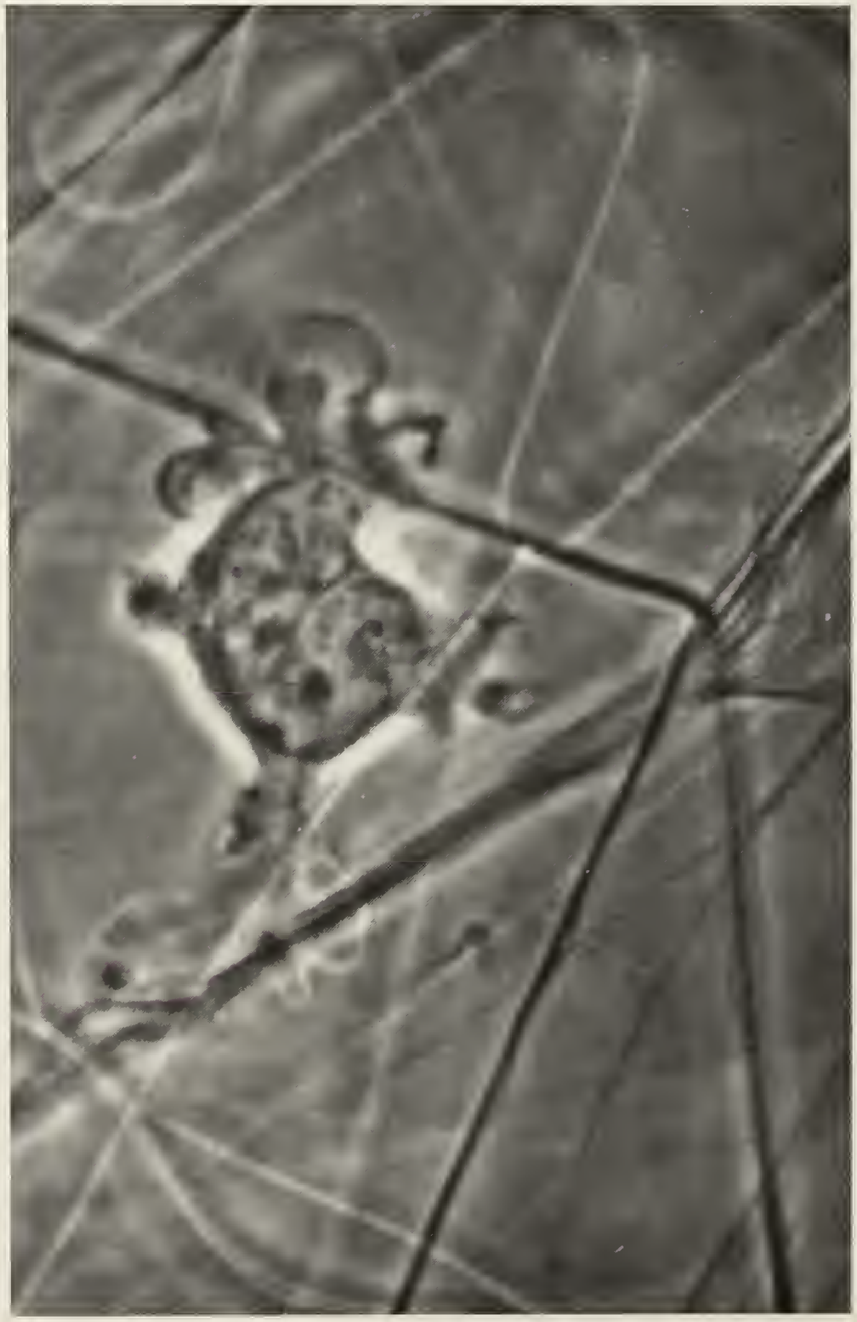
INFLAMMATION:
A cellular fight for life

A SYNTEX REPORT based on recently developed hypotheses about topical corticosteroids, including the cellular theories of inflammation by Thomas F. Dougherty, Ph.D., University of Utah.

You are looking at a fibroblast fighting for life. This cell—one of the most common found in connective tissue—has literally been poisoned by cytotoxins released from other cells that have ruptured. Soon, if the abnormal activity of this fibroblast does not cease, it, too, will rupture and die—one more casualty in the inflammatory wave of destruction precipitated by injury.

Until a short time ago no one had ever witnessed such a scene at the cellular level. Now, through advanced cinemicrographic techniques, it is possible to view and photograph the inflammatory process as produced experimentally in living animal tissue. This method permits new insight into the mechanism of inflammation and the role of corticosteroids in therapeutic management. Equally important, these techniques shed new light on factors that may make one corticosteroid more effective than another—factors that can be correlated with other chemical, biologic, and clinical parameters.

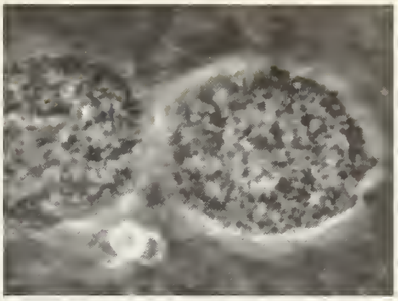


Visual evidence of how corticosteroids influence the inflammatory reaction

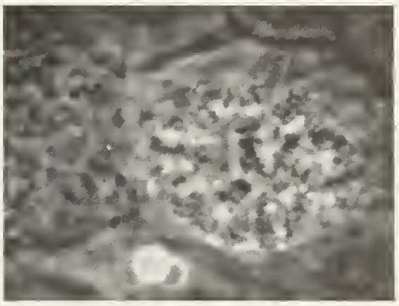
Working with phase-contrast cinemicrography on living animal tissue, Doctors Thomas F. Dougherty and David Berliner of the University of Utah College of Medicine have actually filmed cellular events that occur during the inflammatory reaction. This remarkable study* and additional work by these investigators, as well as by others, have established a new theoretical biologic basis for the antiinflammatory effect of the corticosteroids. (It must be noted that other theories, such as the lysosome or so-called "suicide bag" theory, have been postulated, although it is quite likely that there are more similarities than differences among the various theoretical models.)

The inflammatory wave of destruction

In this investigation an injurious injection of gelatin is used to set off an inflammatory reaction in living mouse tissue. What follows is a wave of destructive cellular activity that comprises the inflammatory response to injury. Mast cells (which contain heparin, serotonin and histamine) take up water, swell and rupture, releasing their contents, which are toxic outside the mast cell wall. These toxins, in turn, cause disintegration of other cells (such as fibroblasts) and the release of additional toxic material. Capillaries, too, take up water and leak unformed blood elements, causing edema. And polymorphonuclears, lymphocytes and perithelial cells invade the inflamed site. As a result of all these changes, the cellular environment reaches a state of turmoil.



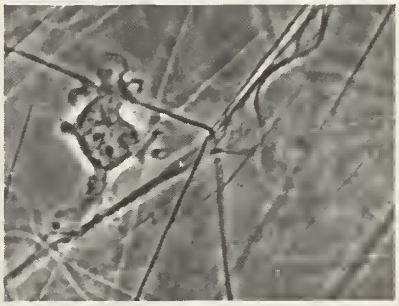
Phase-contrast microscopy showing mast cell before injury.



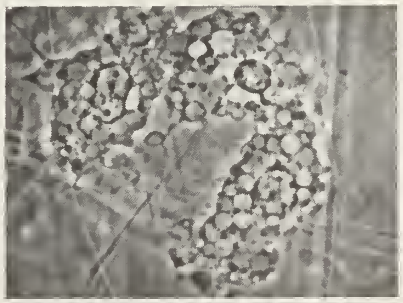
Mast cell (after injury) has broken up and released cytotoxins.

How corticosteroids change the picture

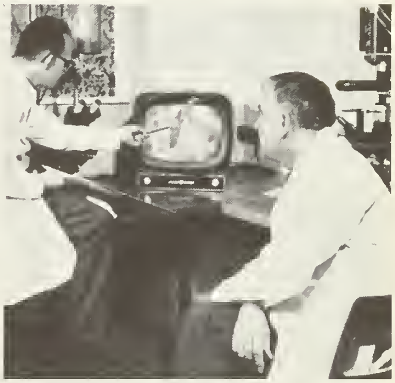
Corticosteroids appear to virtually stop the abnormal cellular activity that constitutes the inflammatory reaction. This permits the body's natural resources to clear up the inflamed area and repair the damaged tissue. This interpretation is supported by the fact that when the injurious gelatin solution is injected simultaneously with a corticosteroid — Synalar (fluocinolone acetonide) — the inflammatory pattern simply does not develop.



Fibroblast in high state of activity, much distorted.



Mast cells showing effects of corticosteroid action: cells are normal in size, shape and activity.



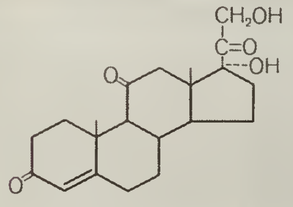
In summarizing his study Doctor Dougherty states: "...we also feel this work may explain why one corticosteroid helps a patient more rapidly and effectively than another. If it does, it is because one corticosteroid is the fastest, most effective inhibitor of the series of inflammatory events at the tissue level."

**A New View of Corticosteroid Action in Inflammatory Dermatoses,* a film based on this study, is now available from your Syntex representative.

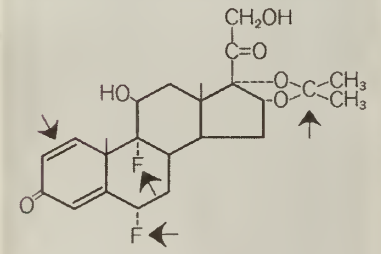
See last page for contraindications, precautions, side effects and dosage.

How advances in chemical design have achieved greater steroid potency

The chemical modification of corticosteroid molecules from the advent of hydrocortisone to the development of Synalar (fluocinolone acetonide) is a prime example of how biochemists can "design" to increase therapeutic activity and minimize undesirable side actions. Below, for example, we see the important changes that were made in reference to the hydrocortisone molecule to produce fluocinolone acetonide, one of the most active of all topical corticosteroids. As a result, a 0.01% preparation of Synalar (fluocinolone acetonide) has been reported to do the work of a 1% hydrocortisone product containing 100 times more cortiscosteroid. And it can often do it more effectively.



Hydrocortisone

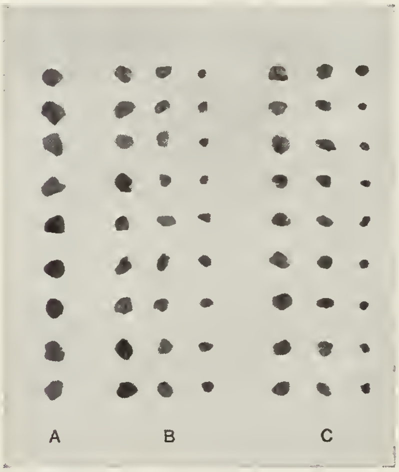


Fluocinolone Acetonide (Synalar)

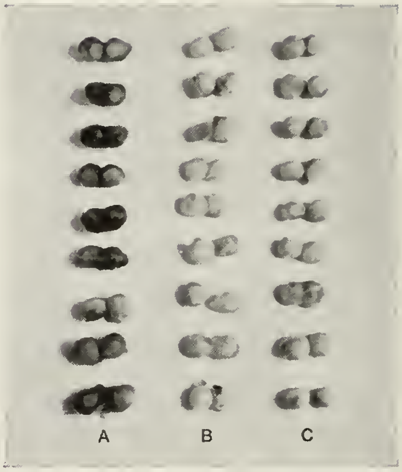
- ☐ *a double bond between carbons 1 and 2*
- ☐ *fluorine substitutions at* both *the 6-α, and the 9-α positions*
- ☐ *the addition of the acetonide at the 16-α, 17-α positions, thus providing one of the most potent topical corticosteroids available.*

How bioassay tests are used to "predict" therapeutic potential

Biologic assays are another tool used by researchers to help establish the relative activity of corticosteroids. To date no single method of assaying corticosteroid activity has emerged as the ideal "yardstick" for predicting therapeutic potential. Taken together, however, these methods have proved useful. When such tests are run on various corticosteroids, a definite order of corticosteroid activity becomes evident. Compounds with the highest order of activity may be expected to merit clinical trial to establish their high therapeutic potential. When assayed by these methods, fluocinolone acetonide (Synalar) emerges as one of the most active topical corticosteroids, milligram for milligram, available for clinical application today.



The Thymus Involution Assay[1-4] is run on adrenalectomized rats. The sizes of the glands are measured, and the degree of involution caused by the steroid is determined as an indication of its potency. In the above photo, the comparative involution of thymus glands achieved with hydrocortisone and Synalar (fluocinolone acetonide) is shown. Untreated controls (A) show normal size. Group B—injected with 1, 2 and 4 mg. of hydrocortisone—show progressively smaller thymuses as does Group C—injected with fluocinolone acetonide—but with only 1/500th the dose of hydrocortisone.



The Antigranuloma Assay[1-4] also utilizes adrenalectomized rats. Granulomas are induced by subcutaneous implantation of cotton pellets on either side of the thorax. The degree of granuloma inhibition achieved by a steroid reflects its potency. The above photo shows the inhibition of granuloma formation achieved with hydrocortisone and Synalar (fluocinolone acetonide). Untreated controls (A) show large, red granulomas adhering to the pellets. Group B, receiving hydrocortisone and Group C, receiving fluocinolone acetonide, show little, if any, granuloma formation. Fluocinolone acetonide produced the same effect as hydrocortisone with only 1/500th the dose. This assay, as well as the thymus involution assay, measures systemic rather than topical corticosteroid activity. Nevertheless, results by these methods correlate well with other assays and with the milligram potencies of topical steroids in current clinical use.

Worldwide clinical experience confirms the predictable therapeutic potential of Synalar

It is particularly gratifying that the promise of the advanced chemical design and high order of bioassay activity of Synalar (fluocinolone acetonide) has been confirmed by widespread therapeutic application. Indeed, the impressive clinical response rate of Synalar has been documented in no fewer than 232 papers from 22 countries.

Representative Clinical Results with Synalar*

Efficacy Documented in over 4,000 Patients

Condition	Number of Publications	Number of Patients	Significant Improvement†
Contact Dermatitis	27	750	713
Eczematous Dermatitis	21	472	409
Seborrheic Dermatitis	18	442	426
Atopic Dermatitis	24	460	426
Psoriasis	36	1,699	1,510
Neurodermatitis	18	351	324
Total	144	4,174	3,808

*Complete bibliography on request.

†Expressed by the authors as excellent, very good, good, complete remission of inflammation, etc.

PRESCRIBING INFORMATION
For initiation of therapy: Cream 0.025%, 5 and 15 Gm. tubes, 425 Gm. jars; *for emollient effect:* Ointment 0.025%, 15 Gm. tubes; *for maintenance therapy:* Cream 0.01%, 15 and 45 Gm. tubes, 120 Gm. jars; *for intertriginous or hairy sites:* Solution 0.01%, 20 cc. and 60 cc. plastic squeeze bottles; *for infected inflammatory dermatoses:* Neo-Synalar® Cream (0.025% fluocinolone acetonide, neomycin sulfate, equivalent to 0.35% neomycin base), 5 and 15 Gm. tubes.
CONTRAINDICATIONS: Tuberculous, fungal, and most viral lesions of the skin, (including herpes simplex, vaccinia, and varicella). Not for ophthalmic use. Contraindicated in individuals with a history of hypersensitivity to any of the components. PRECAUTIONS: Synalar preparations are virtually nonsensitizing and nonirritating. However, the solution may produce burning or stinging when applied to denuded or fissured areas. In some patients with dry lesions, the solution may increase dryness, scaling or itching. While topical steroids have not been reported to have an adverse effect on pregnancy, the safety of their use on pregnant females has not absolutely been established. Therefore, they should not be used extensively on pregnant patients, in large amounts, or for prolonged periods of time. Prolonged use of any antibiotic may result in overgrowth of nonsusceptible organisms; if this occurs, appropriate therapy should be instituted. When severe local infection or systemic infection exists, the use of systemic antibiotics should be considered, based on susceptibility testing. SIDE EFFECTS: Side effects are not ordinarily encountered with topically applied corticosteroids. As with all drugs, however, a few patients may react unfavorably to Synalar under certain conditions. The neomycin in Neo-Synalar Cream rarely produces allergic reactions.

REFERENCES: 1. Lerner, L. J., Bianchi, A., Turkheimer, A. R., Singer, F. M., and Borman, A.: Anti-inflammatory steroids: potency, duration and modification of activities. Ann NY Acad Sci 116:1071 (Aug. 27) 1964. 2. Idem: Comparison of anti-granuloma, thymolytic and glucocorticoid activities of anti-inflammatory steroids. Proc Soc Exp Biol Med 116:385 (June) 1964. 3. Ringler, A.: Activities of adrenocorticosteroids in experimental animals and man, in Dorfman, R. I.: Methods of hormone research, New York, Academic Press, 1964. vol. III. pp. 234-280. 4. Gubersky, V. R.: To be published.

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For inflammatory
dermatoses...
by any measure
a topical corticosteroid
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Synalar®
(fluocinolone acetonide)

Milligram for milligram one of the most active topical corticosteroids available

Rapid and predictable in antiinflammatory and antipruritic activity

Results often comparable to those of systemic corticosteroids with fewer hazards

One by one the family's downed Because the G.I. bug's around

Parepectolin for quick relief of acute diarrhea
...soothes colicky pain with paregoric*
...consolidates fluid stools with pectin
...adsorbs irritants with kaolin,
and protects intestinal mucosa

Whether it's a 24-hour "bug", a food problem, or simply nervousness and anxiety, Parepectolin will bring the diarrhea under control until etiology can be determined. In some cases, Parepectolin may be all the therapy necessary.

Parepectolin®

Each fluid ounce of creamy white suspension contains:

*Paregoric (equivalent)	(1.0 dram) 3.7 ml.
Contains opium (¼ grain) 15 mg. per fluid ounce.	
warning: may be habit forming	
Pectin	(2½ grains) 162 mg.
Kaolin (specially purified)	(85 grains) 5.5 Gm.
(alcohol 0.69%)	

Usual Adult Dose: One or two tablespoonfuls three times daily.

Usual Children's Dose: One or two teaspoonfuls three times daily.

RORER

WILLIAM H. RORER, INC.
Fort Washington, Pa.

mudrane®

for

- EMPHYSEMA
- ASTHMA
- CHRONIC BRONCHITIS
- BRONCHIECTASIS

The fast-disintegrating uncoated tablet gives relief in 15 minutes

Each tablet contains:

Potassium Iodide	195 mg.
Aminophylline	130 mg.
Phenobarbital, Caution: May be habit forming	21 mg.
Ephedrine HCl	16 mg.

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Precautions: Usual for aminophylline-ephedrine-phenobarbital. Iodides may cause nausea, long use may cause goiter. Discontinue if symptoms of iodism develop.

Iodide contraindications: tuberculosis, pregnancy.

DOSAGE

One tablet, with full glass of water, 3 or 4 times daily.

Dispensed in bottles of 100 and 1000 tablets.

MUDRANE GG—Formula, dosage and package identical to Mudrane—*except*—100 mg. glyceryl guaiacolate replaces the potassium iodide. The value of Mudrane cannot be enjoyed by a small group in which K.I. is contraindicated. Mudrane GG is prepared for this group.

MUDRANE GG ELIXIR—Four 5 cc teaspoonfuls is equivalent to one Mudrane GG tablet. Dosage adjusted to age and weight of child. Mudrane GG Elixir is for pediatric patients and those who think they cannot swallow tablets. Dispensed in pint and half gallon bottles.

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n sinusitis, colds, or U.R.I., Dimetapp lets congested patients reathe easy again. Each Extentab rings welcome relief all day or all night, sually without drowsiness or overstimulation. Its key to success? The Dimetapp formula — Dimetane (bromheniramine maleate), a potent antiistamine reported in one study to have licited side effects as few as the placebo,* eamed with decongestants phenylephrine and phenylpropanolamine — n a dependable 10- to 12-hour form.

chiller, I. W., and Lowell, F. C.: New England . Med. 261:478, 1959.

Contraindications: Patients hypersensitive to antihistamines. Not recommended for use during pregnancy.

Precautions: Until the patient's response has been determined, he should be cautioned against engaging in operations requiring alertness. Administer with care to patients with cardiac or peripheral vascular diseases or hypertension.

Side Effects: Hypersensitivity reactions including skin rashes, urticaria, hypotension and thrombocytopenia have been reported on rare occasions. Drowsiness, lassitude, nausea, giddiness, dryness of the mouth, mydriasis, increased irritability, or excitement may be encountered.

Dosage: 1 Extentab morning and evening, or as needed.

Supplied: Bottles of 100 and 500.

Also available: Dimetapp® Elixir for conventional *t.i.d.* or *q.i.d.* dosage. See package insert for further details.

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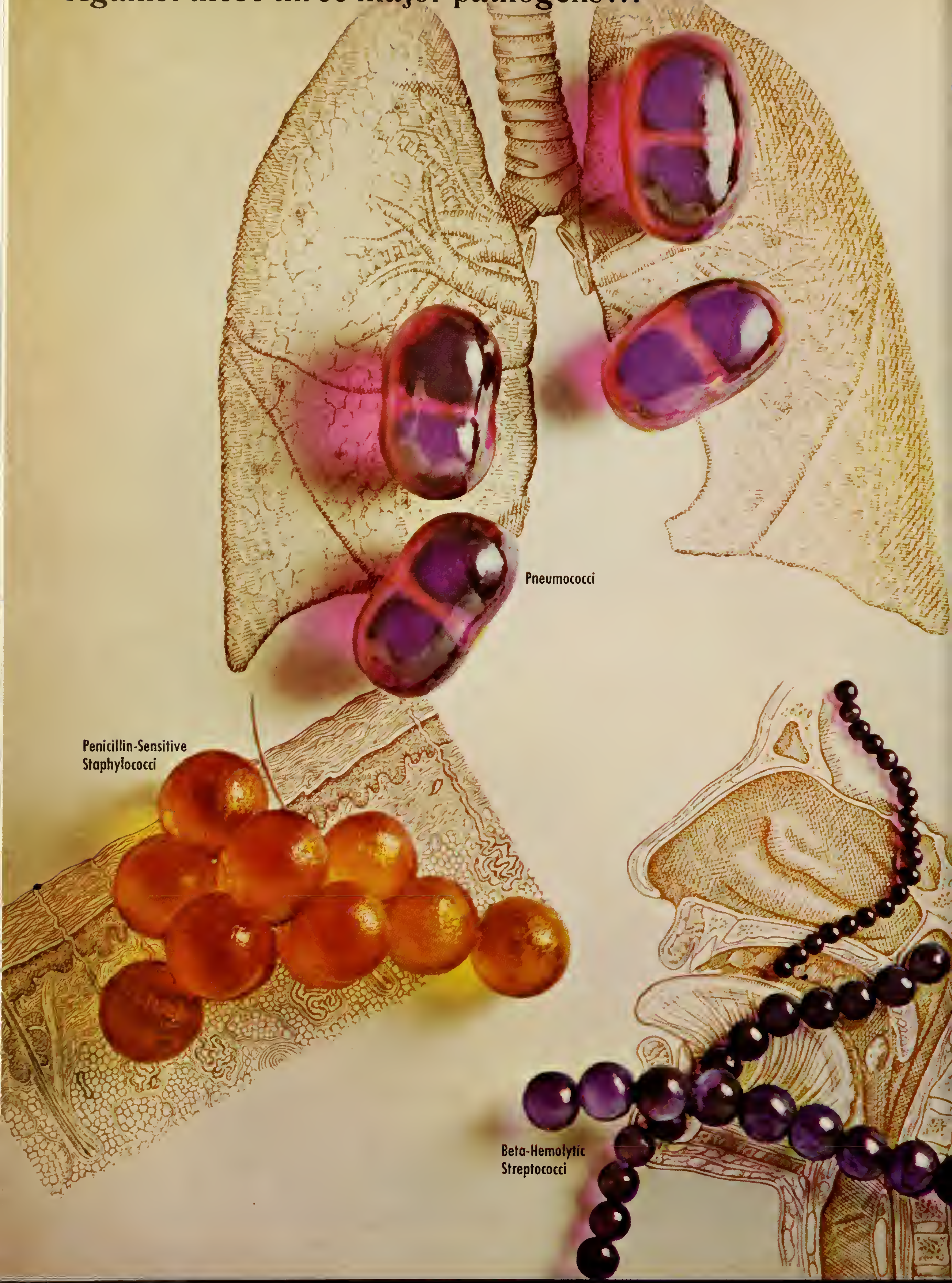
Against these three major pathogens…


Pneumococci
Penicillin-Sensitive Staphylococci
Beta-Hemolytic Streptococci

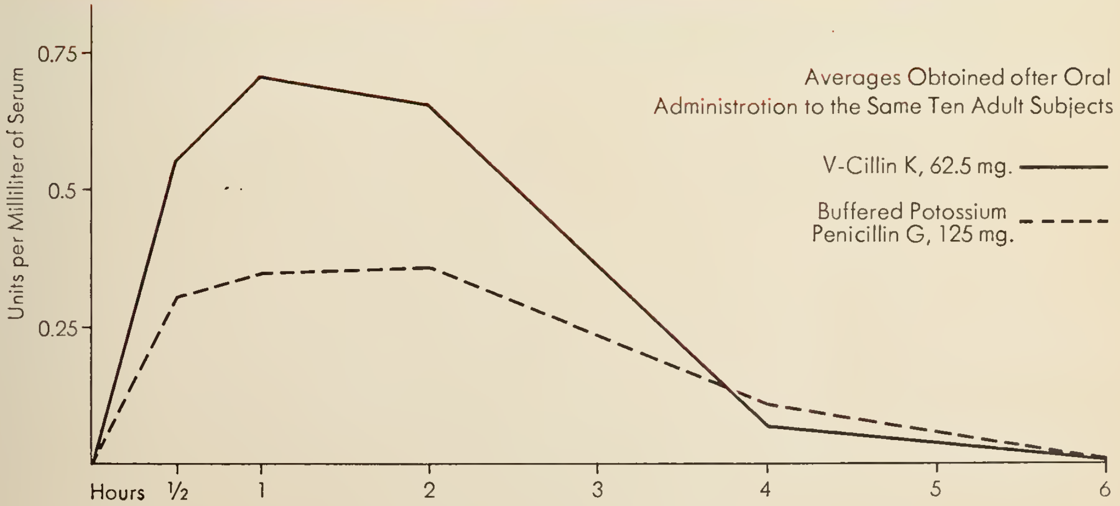
V-Cillin K® provides unexcelled oral antibacterial activity

because it combines a high degree of in-vitro activity...

Antibiotic	Staph. Aureus (Penicillin-Sensitive) MIC (mcg./ml.) Median	Range	Streptococcus, Group A MIC (mcg./ml.) Median	Range	Diplococcus Pneumoniae MIC (mcg./ml.) Median	Range
Penicillin V	0.02	0.02-0.04	0.02	0.003-0.4	0.01	0.005-0.2
Penicillin G	0.02	0.005-1.6	0.005	0.002-0.2	0.02	0.01-0.1
Methicillin	1.6	0.4-6.3	0.2	0.1-0.4	0.2	0.1-1.6
Oxacillin	0.4	0.1-3.1	0.04	0.02-0.4	0.1	0.04-0.8
Cloxacillin	0.2	0.2-0.8	0.1	0.1-0.8	—	—
Nafcillin	0.4	0.2-0.8	0.04	0.02-0.1	0.02	0.02-0.2
Ampicillin	0.2	0.1-0.8	0.02	0.01-0.04	0.02	0.01-0.04

Adapted from Klein, J. O., and Finland, M.: New England J. Med.,269 1019, 1963.

with high blood levels, even in the presence of food



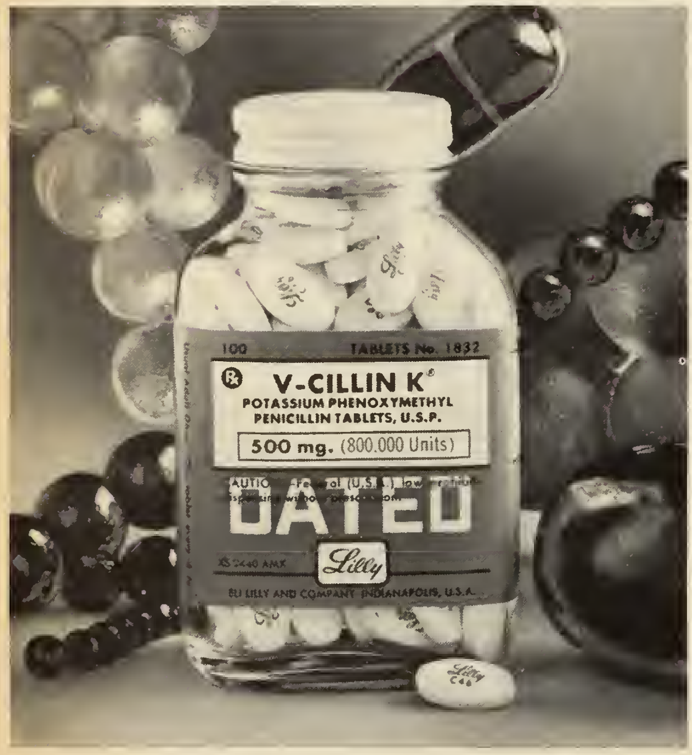
Adapted from Griffith, R. S., and Black, H. R: Current Ther. Res., 6 253, 1964.

V-Cillin K® Lilly 700157

Potassium Phenoxymethyl Penicillin

(See next page for prescribing information.)

New 500 mg. tablets...a more convenient way to give high doses


100 TABLETS No. 1832
V-CILLIN K
POTASSIUM PHENOXYMETHYL PENICILLIN TABLETS, U.S.P.
500 mg. (800,000 Units)
DATED
XS 2440 AMX
Lilly
ELI LILLY AND COMPANY INDIANAPOLIS, U.S.A.

Description: V-Cillin K is the potassium salt of V-Cillin® (phenoxymethyl penicillin, Lilly). This chemically improved form combines acid stability with immediate solubility and rapid absorption. Higher serum levels are obtained more rapidly with this penicillin than with equal oral doses of penicillin G. The higher serum levels and acid stability of V-Cillin K make it a more dependable penicillin for oral use.

V-Cillin K, Pediatric, is an oral solution of clinically proved V-Cillin K in teaspoon dosage form. When mixed as directed, each 5 cc. (approximately one teaspoonful) will contain 125 mg. (200,000 units) phenoxymethyl penicillin as the potassium salt.

Indications: V-Cillin K has been shown to be effective in the treatment of streptococcus, pneumococcus, and gonococcus infections as well as infections caused by sensitive strains of staphylococci. It may be used for the prophylaxis of streptococcus infections in patients with a history of rheumatic fever and for the prevention of bacterial endocarditis after tonsillectomy and tooth extraction in those patients with a history of rheumatic fever or congenital heart disease.

Contraindication: V-Cillin K should not be administered to a patient with a history of penicillin hypersensitivity.

Precautions: V-Cillin K should be used cautiously, if at all, in a patient with a strongly positive history of allergy. Reactions occur more frequently in individuals with bronchial asthma or other allergies or in those who have previously demonstrated sensitivity to penicillin. If hypersensitivity reactions occur, the drug should be discontinued.

Adverse Reactions: Although serious allergic reactions are much less common with administration of oral penicillin than with intramuscular forms, skin rash, symptoms resembling those of serum sickness, or other manifestations of penicillin allergy may occur. When penicillin is administered, measures for treating anaphylaxis should be readily available. These include epinephrine, oxygen, and pressor drugs for relief of immediate allergic manifestations as well as antihistamines and corticosteroids for delayed effects.

The use of antimicrobial agents may be associated with the overgrowth of antibiotic-resistant organisms; in such a case, antibiotic administration should be stopped and appropriate measures taken.

Administration and Dosage: For Tablets V-Cillin K and for V-Cillin K, Pediatric, the usual dosage ranges from 125 mg. (200,000 units) three times a day to 500 mg. (800,000 units) every four hours. For infants, the daily dosage may be 50 mg. per Kg. of body weight divided into three doses.

Beta-hemolytic streptococcus infections without associated bacteremia may be treated with 200,000 to 400,000 units three times a day. Therapy should be continued for a minimum of ten days to prevent development of rheumatic fever and/or other serious complications. Dosage for routine streptococcus prophylaxis in patients with a history of rheumatic fever or congenital heart disease may be 200,000 units once or twice daily. When such patients undergo tonsillectomy, tooth extraction, or other minor surgery, the prophylactic dose should be 500,000 units every six hours given two days prior to surgery and for two days postoperatively. If oral medication is not feasible on the day of surgery, parenteral therapy should be considered. Mild to moderately severe pneumococcus pneumonia has been treated effectively with 250 mg. every six hours.

In staphylococcus infections, 400,000 units or more should be given every six to eight hours in conjunction with indicated surgical procedures.

For gonorrhea in males, 500 mg. (800,000 units) every six hours for three doses may be employed; in females, 500 mg. every four hours for six doses are recommended. Patients with a suspected lesion of syphilis should have a dark-field examination before receiving penicillin and monthly serologic tests for a minimum of three months.

How Supplied: Tablets V-Cillin K, U.S.P., 125 mg. (200,000 units), in bottles of 50 and 100; 250 mg. (400,000 units), and 500 mg. (800,000 units) in bottles of 24 and 100.

V-Cillin K, Pediatric, for Oral Solution, 125 mg. (200,000 units) per 5 cc. of solution, in 40, 80, and 150-cc.-size packages.

Additional information available to physicians upon request. Eli Lilly and Company, Indianapolis, Indiana 46206.

Lilly

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In peptic ulcer... antacid therapy with a new benefit

CONTAINS A BALANCED COMBINATION OF THE MOST WIDELY USED ANTACIDS— FOR RAPID NEUTRALIZATION. PLUS SIMETHICONE— TO CONTROL THE FACTOR WHICH ANTACIDS ALONE CANNOT INFLUENCE.

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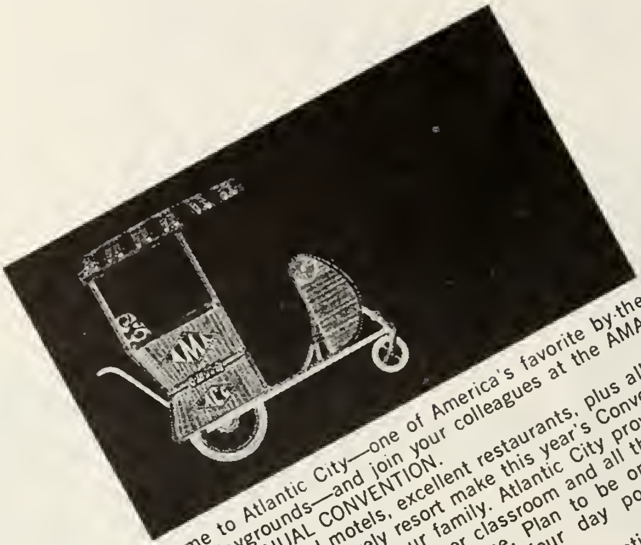
- In Mylanta, aluminum and magnesium hydroxides are balanced to minimize the chance of constipation or laxation and still achieve rapid acid neutralization and pain relief.
- The positive action of simethicone helps relieve the painful gas symptoms which often accompany the peptic ulcer syndrome.
- The nonfatiguing flavor and smooth, nongritty consistency of tablets and liquid encourage continued patient cooperation during long-term therapy.

Composition: Each Mylanta chewable tablet or teaspoonful (5 ml.) of liquid contains: magnesium hydroxide, 200 mg.; aluminum hydroxide, dried gel, 200 mg.; simethicone, 20 mg. **Dosage:** one or two tablets, well chewed or allowed to dissolve in the mouth, or one or two teaspoonfuls of liquid to be taken between meals and at bedtime.

The Stuart Company, Pasadena, California
Division of Atlas Chemical Industries, Inc.

Stuart



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- 575 scientific and industrial exhibits • Lectures • panel discussions • motion pictures • color television. Plan to attend—continue your postgraduate education.

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Confirmations will be mailed up to June 7.

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JUNE 18-22, 1967

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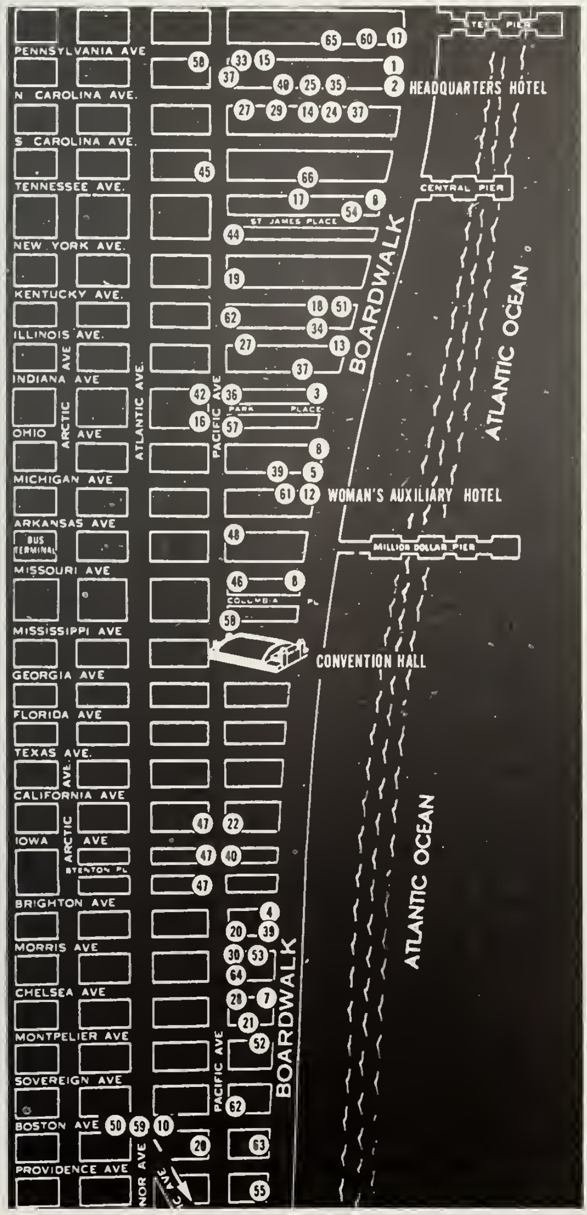


MAP NO.	BOARDWALK HOTELS	SINGLES	DOUBLES	TWINS	SUITES
1.	ABBEY NAC	10—12	12—14	16—20	
2.	CHALFONTE— HADDON FALL*	(HEADQUARTERS HOTEL— NO ROOMS AVAILABLE)			
3.	CLARIDGE HOTEL*	10—26		14—30	58—88
4.	DEAUVILLE HOTEL*	14—20		16—28	45—130
5.	DENNIS HOTEL* PAC	11—21		15—34	46—95
6.	HOLIDAY INN OF ATLANTIC CITY*	12—20	17—19	16—24	40—82
7.	LA CONCHA HOTEL*	12—14		16—24	35—75
8.	MARLBOROUGH-BLENHEIM * (Ocean Wing Only)	21—25		21—25	42
9.	MAYFLOWER HOTEL*	8—10	10—12	10—16	20—24
10.	PRESIDENT HOTEL* PAC	11—20		11—20	23—50
11.	SEASIDE TOWER HOTEL*	12		14—22	44—60
12.	SHELBURNE— EMPRESS HOTEL*	(WOMAN'S AUXILIARY HEADQUARTERS)			
13.	TRAYMORE* PAC	8—22		10—24	25—100

Map No.	OFF-BOARDWALK HOTELS	Singles	Doubles	Twins	Suites
14.	CAROLINA CREST HOTEL PAC	10—12	12	12—14	
15.	COLTON MANOR HOTEL* PAC	12—21		15—24	42—72
16.	EASTBOURNE HOTEL PAC	7—9	10	11	
17.	FLANDERS* NAC	8	10	14	
18.	STERLING PAC	10—12	12—14	12—14	

Map No.	MOTELS	Singles	Doubles	Twins	Suites
19.	ACAPULCO MOTEL	12	14	16—20	
20.	ALGIERS MOTEL*	12—14	14—16	12—20	45
21.	ALOHA MOTEL	14—16		14—28	
22.	ASCOT MOTEL	14—16		14—18	
23.	BALA MOTEL	12—18		16—24	
24.	BARBIZON MOTEL INN	11—13	15	17—23	60
25.	BARCLAY MOTOR INN	20—28		20—30	55—65
26.	BLAIR MOTOR INN	12—16		16—22	
27.	BURGUNDY MOTEL	12—16		16—26	
28.	CARIBE MOTEL	10—12	12	14—18	
29.	CAROLINA CREST MOTEL	14—16		14—16	
30.	CASTLE ROC MOTEL	14	14—20	14—20	40
31.	CATALINA MOTEL	14—20		14—18	
32.	COLONY MOTEL*	10—22		12—24	45—80
33.	COLTON MANOR MOTEL*	22—28		24—30	54—90
34.	CONTINENTAL MOTEL	14—16		14—20	
35.	CORONET MOTEL	16—22	18—26	16—24	50—60
36.	CRILLON MOTEL	16—22		18—24	
37.	CROWN MOTEL	14	16	18	
38.	DEAUVILLE MOTEL*	14—24		16—32	100—130
39.	DENNIS MOTEL*	15—25		15—29	
40.	DIPLOMAT MOTEL	10—12		14—24	30—36
41.	DUNES MOTEL	16	16—20	16—20	
42.	EASTBOURNE MOTEL		16—20	16—24	
43.	ELDORADO MOTEL	16		14—18	
44.	ENVOY MOTEL	10	12	14—16	
45.	FIESTA MOTEL*	14—16		16—22	35
46.	FOUR SEASONS MOTEL	14—18		18—24	
47.	GALAXIE MOTEL	12—16		10—16	
48.	HOWARD JOHNSONS*	14—18	14—18	18—30	44—90
49.	LA FAYETTE MOTOR INN*	(CO-HQS HOTEL NO ROOMS AVAILABLE)			
50.	LINCOLN-ROOSEVELT BEACH MOTEL	16—18		14—20	18—28
51.	LOMBARDY*	12—24		14—26	
52.	MALIBU MOTEL	12—14		16—20	
53.	MARDI GRAS MOTEL	14—16		16—22	25
54.	MAYFLOWER MOTEL*	10—12		10—16	
55.	MONTE CARLO BEACH MOTEL	11		13—15	
56.	MONTEREY MOTEL	14—16	14—16	18—20	
57.	MOUNT ROYAL*	12—24		14—26	
58.	PAGEANT MOTOR INN MOTEL*	16—20		18—26	40—44
59.	PRESIDENT MOTEL*	13—22		13—22	
60.	SEASIDE MOTEL*	14		16—22	
61.	SHELBURNE— EMPRESS MOTEL*	12—24		14—34	
62.	SORRENTO MOTEL*	10—14		16—22	
63.	STRAND OF ATLANTIC CITY MOTEL*	10—14		13—17	
64.	TEPLITZKY'S MOTEL	14		14—18	
65.	TERRACE*	14		16—22	
66.	TRINIDAD MOTEL	14—16		16—28	
67.	TROPICANA MOTEL	8	10—12	14—18	20—24

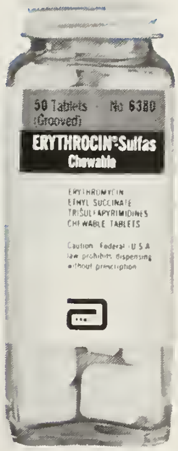
**Restaurant and/or Coffee Shop on premises*

All 100% Air Conditioned Except as Noted:

NAC (No Air Conditioning); PAC (Partial Air Conditioning)

Perhaps there have been times when you wanted to prescribe erythromycin and triple sulfas for little patients. Now you can—with a choice of two new fine-tasting pediatric forms.

New–Two Pediatric Forms of Erythromycin and Triple Sulfas


50 Tablets (Grooved)
No. 6380
ERYTHROCIN®-Sulfas
Chewable
ERYTHROMYCIN ETHYL SUCCINATE TRISULFAPYRIMIDINES CHEWABLE TABLETS
Caution: Federal (U.S.A.) law prohibits dispensing without prescription

ERYTHROCIN®-SULFAS Chewable

(Erythromycin ethyl succinate-trisulfapyrimidines chewable tablet)

In clinical trials[1,2], this orange-flavored tablet was given to 55 patients, aged four months to 18 years.

Diagnoses (multiple in some cases) represented a cross section of bacterial infections commonly seen in pediatric office practice.

Therapy was given from three to 12 days, with an average of six days.

Of the 55 patients, 30 were reported cured within 72 hours, while 22 showed partial recovery within the same time, and subsequent clinical cure.

A clinical cure rate of 94.5%

ERYTHROCIN®-SULFAS Granules

(Erythromycin ethyl succinate-trisulfapyrimidines granules for oral suspension)

87 patients were treated[1,2]—all children, ages four months to 15 years.

The diagnoses were multiple in some cases and were chiefly bacterial infections of the respiratory tract.

Dosage was maintained from three to 10 days; average treatment was five days. All of the ill children accepted the orange-flavored suspension favorably.

53 were clinically cured within 72 hours, while 32 showed partial relief within the same time, and subsequent clinical cure.

701358

A clinical cure rate of 97.7%

1. Case Reports on File, Dept. Clin. Development, Abbott Laboratories.
2. Polley, R.F.L., Use of Erythromycin-Sulfas in Office Practice, Western Med., 7:177, July, 1966.

ABBOTT

Brief Summary on next page

ERYTHROCIN®-SULFAS

Brief Summary

Contraindications: Known sensitivity to erythromycin or sulfonamides. Because of the possibility of kernicterus with sulfonamides, do not use in pregnancy at term, premature or newborn infants.

Warnings: As with other forms of sulfonamide therapy, carefully evaluate patients with liver or kidney damage, urinary obstruction, or blood dyscrasia. Deaths have been reported from hypersensitivity reactions and blood dyscrasias following use of sulfonamides. Perform blood counts and liver and kidney function tests if used repeatedly at close intervals or for long periods.

Precautions, Side Effects: Occasionally mild abdominal discomfort, nausea or vomiting may occur with erythromycin, generally controlled by reduction of dosage. Mild allergic reactions (such as urticaria and other skin rashes) may occur. Serious allergic reactions have been extremely infrequent. Use sulfonamides with caution in patients with a history of allergy. Assure adequate fluid intake to prevent crystalluria and institute alkali therapy if indicated. If overgrowth of nonsusceptible organisms occurs, withdraw the drug and institute appropriate treatment. If a patient should show signs of hypersensitivity, appropriate countermeasures (e.g. epinephrine, steriods, etc.) should be administered and the drug withdrawn.

Adverse Reactions: Sulfonamide therapy may be associated with headache, nausea, vomiting, urticaria, diarrhea, hepatitis, pancreatitis, blood dyscrasias, neuropathy, drug fever, skin rash, injection of the conjunctiva and sclera, petechiae, purpura, hematuria and crystalluria.

Side effects due to erythromycin are infrequent, but occasional abdominal discomfort, nausea, or vomiting, urticaria and other skin rashes may occur.

Supplied: The Granules for Oral Suspension come in bottles of 60 ml. and 150 ml. The Chewable tablets are in bottles of 50. Each 5-ml. teaspoonful of reconstituted Granules or each Chewable tablet provides erythromycin ethyl succinate equivalent to 125 mg. of erythromycin activity and 167 mg. of each of sulfadiazine, sulfamerazine and sulfamethazine.

701358

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Tandearil®

oxyphenbutazone

Therapeutic Effects: Tandearil is a nonhormonal compound which may rapidly resolve inflammation and help restore normal joint function. Its action does not affect pituitary-adrenal function or impair immune responses. Its value in osteoarthritis is especially noteworthy because this disorder responds inconsistently to steroids and is often resistant to salicylates. Further, indomethacin is limited only to osteoarthritis of the hip, whereas oxyphenbutazone is effective in all forms of the disease.

Contraindications: Edema; danger of cardiac decompensation; history or symptoms of peptic ulcer; renal, hepatic or cardiac damage; history of drug allergy; history of blood dyscrasia. The drug should not be given when the patient is senile or when other potent drugs are given concurrently.

Warning: If coumarin-type anticoagulants are given simultaneously, watch for excessive increase in prothrombin time. Pyrazole compounds may potentiate the pharmacologic action of sulfonylurea, sulfonamide-type agents and insulin. Carefully observe patients receiving such therapy. Use with great caution in the first trimester of pregnancy.

Precautions: Obtain a detailed history and a complete physical and laboratory examination, including a blood count. The patient should be closely supervised and should be warned to report immediately fever, sore throat, or mouth lesions (symptoms of blood dyscrasia); sudden weight gain (water retention); skin reactions; black or tarry stools or other evidence of intestinal hemorrhage. Make regular blood counts. Discontinue the drug and institute countermeasures if the white count changes significantly, granulocytes decrease, or immature forms appear. Use greater care in the elderly and in hypertensives.

Adverse Reactions: The most common are nausea, edema and drug rash. The drug has been associated with peptic ulcer and may reactivate a latent peptic ulcer. Infrequently, agranulocytosis, or a generalized allergic reaction may occur and require withdrawal of medication. Stomatitis, salivary gland enlargement, vomiting, vertigo and languor may occur. Leukemia and leukemoid reactions have been reported but cannot definitely be attributed to the drug. Thrombocytopenic purpura and aplastic anemia may occur. Confusional states, agitation, headache, blurred vision, optic neuritis and transient hearing loss have been reported, as have hyperglycemia, hepatitis, jaundice, and several cases of anuria and hematuria. With long-term use, reversible thyroid hyperplasia may occur infrequently. Moderate lowering of the red cell count due to hemodilution may occur.

Dosage in Osteoarthritis: The initial daily dosage in adults is 300-600 mg. in divided daily doses. When improvement occurs, dosage should be decreased to the minimum effective level; this should not exceed 400 mg. daily, and is often achieved with only 100-200 mg. daily.

For complete details, please refer to full prescribing information. 6562-VI(B)R

Availability: Tablets of 100 mg.

Geigy Pharmaceuticals
Division of Geigy Chemical Corporation
Ardsley, New York

Geigy

Tandearil®
oxyphenbutazone

helps osteoarthritic joints move again

3 out of 4 osteoarthritics completely or markedly improved

Sperling, I.L.: 3 Years' Experience with Oxyphenbutazone in the Treatment of Rheumatic Disorders, Applied Therapeutics 6:117, 1964.	76.9% of 407 patients
Watts, T.W., Jr.: Treatment of Rheumatoid Disorders with Oxyphenbutazone, Clin. Med. 73:65, 1966.	84.6% of 39 patients

Please see adjoining page for brief prescribing summary.

TA-4919 PC

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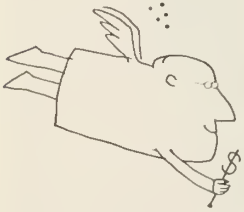
The St. Paul "Top Brass" Policy is for people like you who, by profession, are vulnerable to heavy liability judgments. Not every insurance company offers this kind of policy; few cover so broadly.

You can now increase your Professional (and personal) Liability coverage by as much as $5,000,000. And you get extra "major medical" coverage in most cases at no extra cost.



Now our brochure about this policy is printed on what appears to be solid mahogany. The thought of wasting one of these brochures makes our thrifty souls twitch. (The same thrift which has kept us so solvent these 114 years.) So only if you feel you really need our "Top Brass" brochure . . . write for one.

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'Livingston . . . vertigo is my doom!"
Cried Stanley in his doctor's room.

Said the doc, "For your ills
I've got just the pills."

Said Stan,
"Antivert, I presume."

Antivert® tablets/syrup stops vertigo

(meclizine HCl, niacin)

Tablets: (meclizine HCl 12.5 mg. and niacin 50 mg.) Syrup: (each 5 cc. teaspoonful contains meclizine HCl 6.25 mg. and niacin 25 mg.)

Most widely prescribed anti-vertigo agent[1] Complete to moderate relief of symptoms in 9 out of 10 patients[2]

Antivert, the leading anti-vertigo product,[1] combines meclizine HCl, an outstanding drug for treatment of vestibular dysfunction, with niacin, a drug of choice for prompt vasodilation. Prescribe Antivert for your patients with vertigo, Meniere's syndrome and allied disorders.

Precautions and contraindications: Frequent, short-lived reactions include: cutaneous flushing, sensations of warmth, tingling and itching, burning of skin, increased gastrointestinal motility, and sebaceous gland activity. In explaining these reactions to the patient, it is suggested that they be regarded as a desirable physiological sign that the niacin is carrying out its intended function of vasodilation. Because of this vasodilation, severe hypotension and hemorrhage are obvious contraindications to Antivert therapy. Although the incidence of drowsiness and other atropine-like side effects such as dry mouth and blurring of vision is low, the physician should alert the patient to the need for due precautions when engaging in activities where alertness is mandatory. **Use in women of childbearing age:** A review of available animal data reveals that meclizine exerts a teratogenic response in the rat. In one study a dose of 50 mg./kg./day (50 times the maximum recommended human dose) produced cleft palate in 2 of 87 fetuses when administered to the rat at critical times during the first 15 days of gestation. At doses of 125 mg./kg./day, meclizine will produce 100% incidence of cleft palate in the rat. At doses of 25 mg./kg./day, decreased calcification of the vertebrae and relative shortening of the limbs were also produced in the rat, but experts disagree as to whether this is a teratogenic response. While available clinical data are inconclusive, scientific experts are of the opinion that this drug may possess a potential for adverse effects on the human fetus. Consequently, consideration should be given to initial use of a nonphenothiazine agent that is not suspected of having a teratogenic potential. In any case, the dosage and duration of treatment should be kept to a minimum. **Dosage:** One tablet or one to two teaspoonfuls (5-10 cc.) t.i.d. just before meals. Specific requirements for individual patients should be determined by the physician. **Supplied:** Tablets in bottles of 100 and 500. Syrup in pint bottles. RX only.

References: 1. Based on 1966 data from independent physicians' market survey organization. 2. Scal, J. C.: Eye Ear Nose & Throat Month. **38**:738 (Sept.) 1959.

Neobon®

geriatric supplement

helps keep them 'on the go'

Each capsule contains:

(1) **Vitamins and Minerals**	
Vitamin A (acetate)	2000 U.S.P. units
Vitamin D (ergocalciferol, U.S.P.)	200 U.S.P. units
Vitamin B_1 (thiamine mononitrate, U.S.P.)	0.5 mg.
Vitamin B_2 (riboflavin, U.S.P.)	0.5 mg.
Vitamin B_6 (pyridoxine HCl, U.S.P.)	0.5 mg.
Niacinamide, U.S.P.	50 mg.
Calcium pantothenate, U.S.P.	5 mg.
Vitamin E (di-alpha tocopheryl acetate)	5 I.U.
Rutin	5 mg.
Cobalt (from cobalt sulfate)	0.033 mg.
Molybdenum (from sodium molybdate)	0.066 mg.
Copper (from copper sulfate)	0.33 mg.
Manganese (from manganese sulfate)	0.33 mg.
Magnesium (from magnesium sulfate)	2 mg.
Iodine (from potassium iodide)	0.05 mg.
Potassium (from potassium sulfate)	1.66 mg.
Zinc (from zinc sulfate)	0.4 mg.
(2) **Hematopoietic Factors**	
Iron (from ferrous sulfate)	3.40 mg.
Vitamin B_{12} (cobalamin concentrate, N.F., as Stablets®)	1 mcg.
Vitamin C (ascorbic acid, U.S.P.)	50 mg.
(3) **Digestive Enzyme**	
Pancreatic substance*	50 mg.
(4) **Gonadal Hormones**	
Methyltestosterone, N.F.	1.0 mg.
Ethinyl Estradiol, U.S.P.	0.006 mg.
(5) **Amino Acids**	
L-lysine (monohydrochloride)	50 mg.
L-Glutamic acid	30 mg.

*Enzymatically active defatted material obtained from 250 mg. of whole fresh pancreas.

For older adults who require it, daily supplementation with Neobon can help overcome decreases in endogenous gonadal hormone production, as well as deficiencies of iron, vitamins and other nutritional factors. In a single convenient capsule, Neobon provides vitamins, minerals, gonadal hormones, hematopoietic factors, digestive enzymes, and amino acids—all selected for adjunctive therapeutic value in the geriatric syndrome. For example, one of the gonadal hormones in Neobon is ethinyl estradiol. It is more slowly metabolized in the body than natural estrogens or their esters.

Precautions: Contraindicated in patients in whom estrogen or androgen therapy should not be used, as in carcinoma of the breast or prostate.

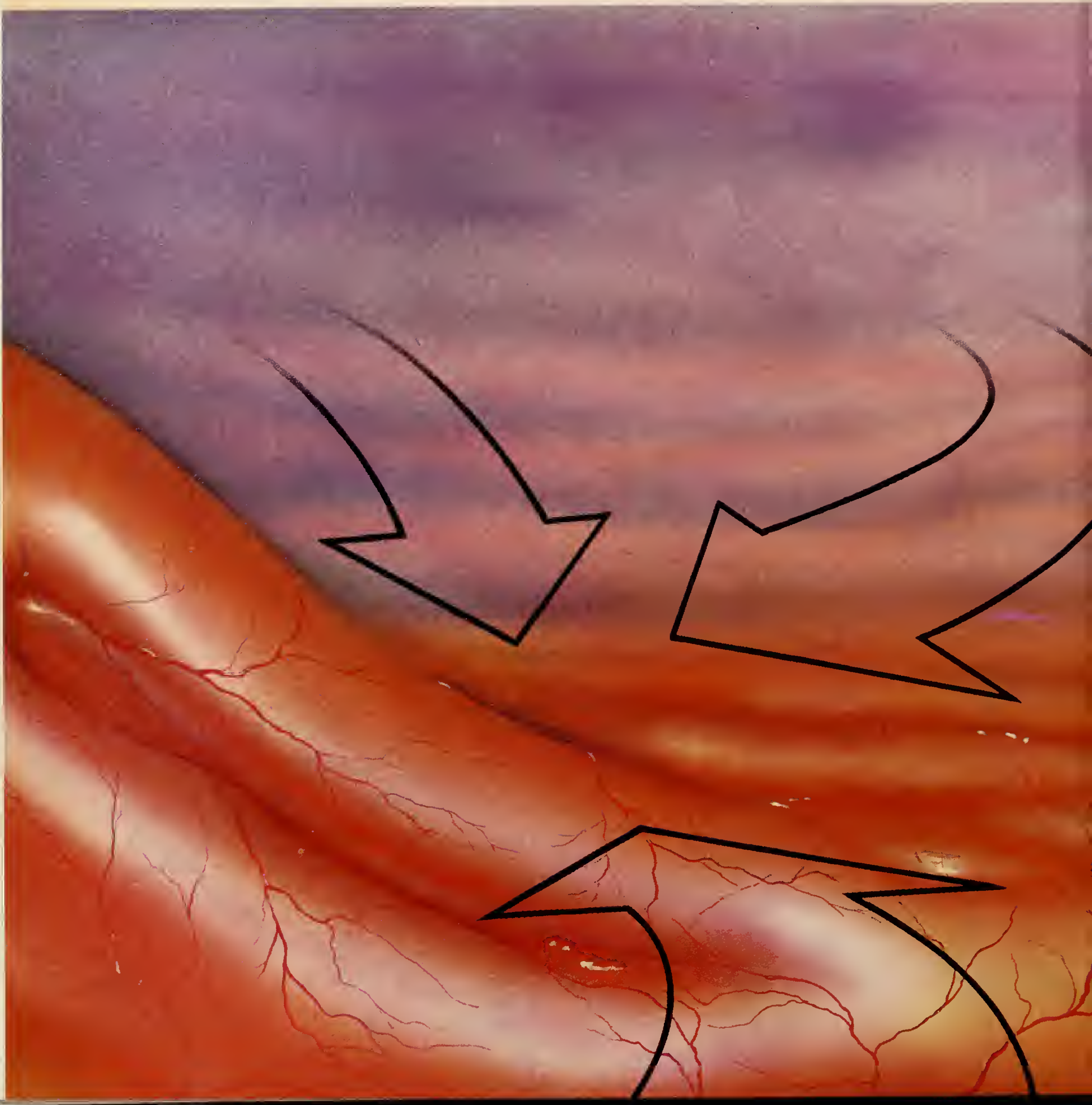
Dosage: One capsule, t.i.d. with meals, or as directed by physician.

Supplied: Bottles of 60 capsules. Rx only.

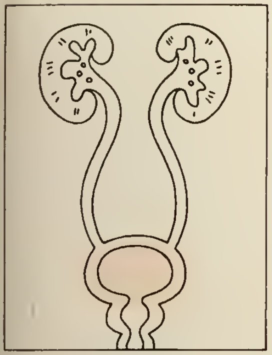
J.B. ROERIG DIVISION
CHAS. PFIZER & CO., INC.
NEW YORK, N.Y. 10017

The battle with bacteria: cystitis

Artist's conception of cystoscopic view of bladder showing congested blood vessels and edema around ureteral orifice.



consider Gantanol (sulfamethoxazole)



For vigorous treatment of G.U. infections before the invaders become entrenched... Gantanol (sulfamethoxazole) offers a comprehensive spectrum of antibacterial effectiveness against most common gram-negative as well as gram-positive invaders. In addition, it provides satisfactory concentrations in the blood and urine with ready diffusion into interstitial fluids for antibacterial activity at foci of bacterial invasion.

High antibacterial activity against *E. coli* and other common urinary pathogens... A review of 153 cases of acute G.U. infections reported in the literature shows that 90% responded to Gantanol (sulfamethoxazole), with over one-half of these patients showing excellent relief of symptoms.[1,2] Even in stubborn chronic G.U. infections, almost 60% of 450 patients improved on Gantanol (sulfamethoxazole), including many who had not responded to other antibacterials.[1-6]

Generally uncomplicated therapy enhances the favorable clinical results... Of the total 686 patients from the studies cited,[1-6] only three discontinued therapy because of side effects. Most of the side effects reported (approximately 3%) were mild and included nausea and/or vomiting, skin rash, dizziness, headache, gastritis, generalized uneasiness and itching.[1-6]

1. Peters, J. H.: *J. Urol., 87*:747, 1962. 2. Draper, J. W., *et al.*: *South. M. J., 57*:920, 1964. 3. Stewart, B. L.: *J. Urol., 87*:491, 1962. 4. Hagstrom, R. S.: *Rocky Mountain M. J.*, 59:(2), 37, 1962. 5. Arnold, J. H.: *Clin. Med., 71*:552, 1964. 6. Nelson, C. G.: *Colorado GP*, 3:(3), 2, 1961.

Before prescribing, please consult complete product information, a summary of which follows:

Contraindicated in sulfonamide-sensitive patients, pregnant females at term, premature infants, or newborn infants during first three months of life.

Warnings: Use only after critical appraisal in patients with liver damage, renal damage, urinary obstruction or blood dyscrasias. If toxic or hypersensitivity reactions or blood dyscrasias occur, discontinue therapy. In intermittent or prolonged therapy, blood counts and liver and kidney function tests should be performed.

Precautions: Observe usual sulfonamide therapy precautions, including maintenance of an adequate fluid intake. Use with caution in patients with histories of allergies and/or asthma. Patients with impaired renal function should be followed closely since renal impairment may cause excessive drug accumulation. Occasional failures may occur due to resistant microorganisms. Not effective in virus or rickettsial infections.

Adverse Reactions: Headache, nausea, vomiting, urticaria, diarrhea, hepatitis, pancreatitis, blood dyscrasias, neuropathy, drug fever, skin rash, Stevens-Johnson syndrome, injection of the conjunctiva and sclera, petechiae, purpura, hematuria or crystalluria may occur, in which case the dosage should be decreased or the drug withdrawn.

Dosage: Adults—4 tablets initially, then 2 tablets b.i.d. or t.i.d. depending upon severity of infection. Children—1 tablet/20 lbs initially, followed by ½ tablet/20 lbs b.i.d.

How Supplied: Tablets, 0.5 Gm, bottles of 50.

Roche Laboratories
Division of Hoffmann-La Roche Inc.
Nutley, New Jersey 07110

ROCHE

when there are bacterial invaders in the bladder, prostate or kidneys

Gantanol®
(sulfamethoxazole)

Everyone says she's a barrel of fun

But what does she think?

Many overweight patients can benefit from the appetite control provided by the sustained anorexigenic-tranquilizing action of BAMADEX SEQUELS: anorexigenic action of amphetamine; tranquilizing action of meprobamate; prolonged action through sustained release of active ingredients.

Bamadex® Sequels®

DEXTRO-AMPHETAMINE SULFATE (15 mg.) SUSTAINED RELEASE CAPSULES
WITH MEPROBAMATE (300 mg.)

to help establish a new dietary pattern

Contraindications: Dextro-amphetamine sulfate: in hyperexcitability and in agitated prepsychotic states. Previous allergic or idiosyncratic reactions to meprobamate.

Precautions: Use with caution in patients hypersensitive to sympathomimetic compounds, who have coronary or cardiovascular disease, or are severely hypertensive.

Dextro-amphetamine sulfate: Excessive use by unstable individuals may result in psychological dependence.

Meprobamate: Careful supervision of dose and amounts prescribed is advised, especially for patients with known propensity for taking excessive quantities of drugs. Excessive and prolonged use in susceptible persons, e.g. alcoholics, former addicts, and other severe psychoneurotics, has been reported to result in dependence on the drug. Where excessive dosage has continued for weeks or months, reduce dosage gradually. Sudden withdrawal may precipitate recurrence of preexisting symptoms such as anxiety, anorexia, or insomnia; or withdrawal reactions such as vomiting, ataxia, tremors, muscle twitching and, rarely, epileptiform seizures. Should meprobamate cause drowsiness or visual disturbances, reduce dosage and avoid operation of motor vehicles, machinery or other activity requiring alertness. Effects of excessive alcohol consumption may be increased by meprobamate. Appropriate caution is recommended with patients prone to excessive drinking. In patients prone to both petit and grand mal epilepsy meprobamate may precipitate grand mal attacks. Prescribe cautiously and in small quantities to patients with suicidal tendencies.

Side Effects: Overstimulation of the central nervous system, jitteriness and insomnia or drowsiness.

Dextro-amphetamine sulfate: Insomnia, excitability, and increased motor activity are common and ordinarily mild side effects. Confusion, anxiety, aggressiveness, increased libido, and hallucinations have also been observed, especially in mentally ill patients. Rebound fatigue and depression may follow central stimulation. Other effects may include dry mouth, anorexia, nausea, vomiting, diarrhea, and increased cardiovascular reactivity.

Meprobamate: Drowsiness may occur and can be associated with ataxia; the symptom can usually be controlled by decreasing the dose, or by concomitant administration of central stimulants. Allergic or idiosyncratic reactions: maculopapular rash, acute nonthrombocytopenic purpura with petechiae, ecchymoses, peripheral edema and fever, transient leukopenia. A case of fatal bullous dermatitis, following administration of meprobamate and prednisolone, has been reported. Hypersensitivity has produced fever, fainting spells, angioneurotic edema, bronchial spasms, hypotensive crises (1 fatal case), anuria, stomatitis, proctitis (1 case), anaphylaxis, agranulocytosis and thrombocytopenic purpura, and a fatal instance of aplastic anemia, but only when other drugs known to elicit these conditions were given concomitantly. Fast EEG activity, usually after excessive dosage. Impairment of visual accommodation. Massive overdosage may produce drowsiness lethargy, stupor, ataxia, coma, shock, vasomotor and respiratory collapse.

Lederle

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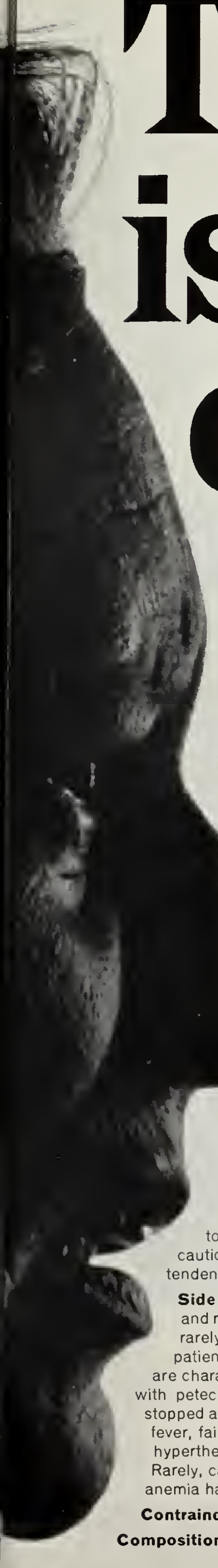
695-6



This pain is getting on my nerves.

Patients in pain often experience concomitant anxiety and tension, which may add to the burden of pain.

For such patients, you may want to prescribe a preparation that offers more than simple analgesia.

A good choice is often EQUAGESIC® (meprobamate and ethoheptazine citrate with aspirin). It helps relieve pain. And anxiety. And skeletal muscle spasm as related to pain or anxiety and tension.

Equagesic® TABLETS (meprobamate and ethoheptazine citrate with aspirin)

Wyeth®

Precautions: Keep out of reach of children. Carefully supervise dose and amounts prescribed, especially for patients prone to overdose themselves. Excessive prolonged use of meprobamate may result in dependence or habituation in susceptible persons—as ex-addicts, alcoholics, severe psychoneurotics. Withdraw gradually after prolonged high dosage to avoid possibly severe withdrawal reactions including epileptiform seizures. Warn patients of possible reduced alcohol tolerance. If drowsiness, ataxia or visual disturbances occur, reduce dose. If symptoms persist, caution patients against operating machinery or driving. Give cautiously to patients with suicidal tendencies. Treat attempted suicide with immediate gastric lavage and appropriate supportive therapy.

Side Effects: Ethoheptazine and aspirin may occasionally cause nausea, vomiting, epigastric distress, and rarely dizziness and CNS depression. Overdosage may result in salicylate intoxication. Meprobamate rarely causes allergic or idiosyncratic reactions. These reactions, sometimes severe, can develop in patients receiving only 1 to 4 doses who have had no previous contact with meprobamate. Mild reactions are characterized by urticarial or erythematous maculopapular rash. Acute nonthrombocytopenic purpura with petechiae, ecchymoses, peripheral edema and fever have been reported. Meprobamate should be stopped and not reinstituted. Severe reactions, observed very rarely, include angioedema, bronchial spasms, fever, fainting spells, hypotensive crises (1 fatal case), anaphylaxis, stomatitis and proctitis (1 case) and hyperthermia. A few cases of leukopenia, usually transient, have been reported following prolonged dosage. Rarely, cases of aplastic anemia (1 fatal case), thrombocytopenic purpura, agranulocytosis, and hemolytic anemia have been reported; almost always, in the presence of known toxic agents.

Contraindications: History of sensitivity or severe intolerance to aspirin or meprobamate.

Composition: 150 mg. meprobamate, 75 mg. ethoheptazine citrate and 250 mg. aspirin per tablet.

Wyeth Laboratories Philadelphia, Pa.

Togetherness....

...can be rough when epidemics of nausea and vomiting strike a family. Emetrol offers prompt, safe relief. It is free from toxicity[1] or side effects[2,3] and will not mask symptoms of serious organic disorders.

1. Bradley, J. E., *et al.*: J. Pediat. *38*:41 (Jan.) 1951.
2. Bradley, J. E.: Mod. Med. *20*:71 (Oct. 15) 1952.
3. Crunden, A. B., Jr., and Davis, W. A.: Am. J. Obst. & Gynec. *65*:311 (Feb.) 1953.

RORER

WILLIAM H. RORER, INC.
Fort Washington, Pa.

Emetrol®
phosphorated carbohydrate solution
emesis control

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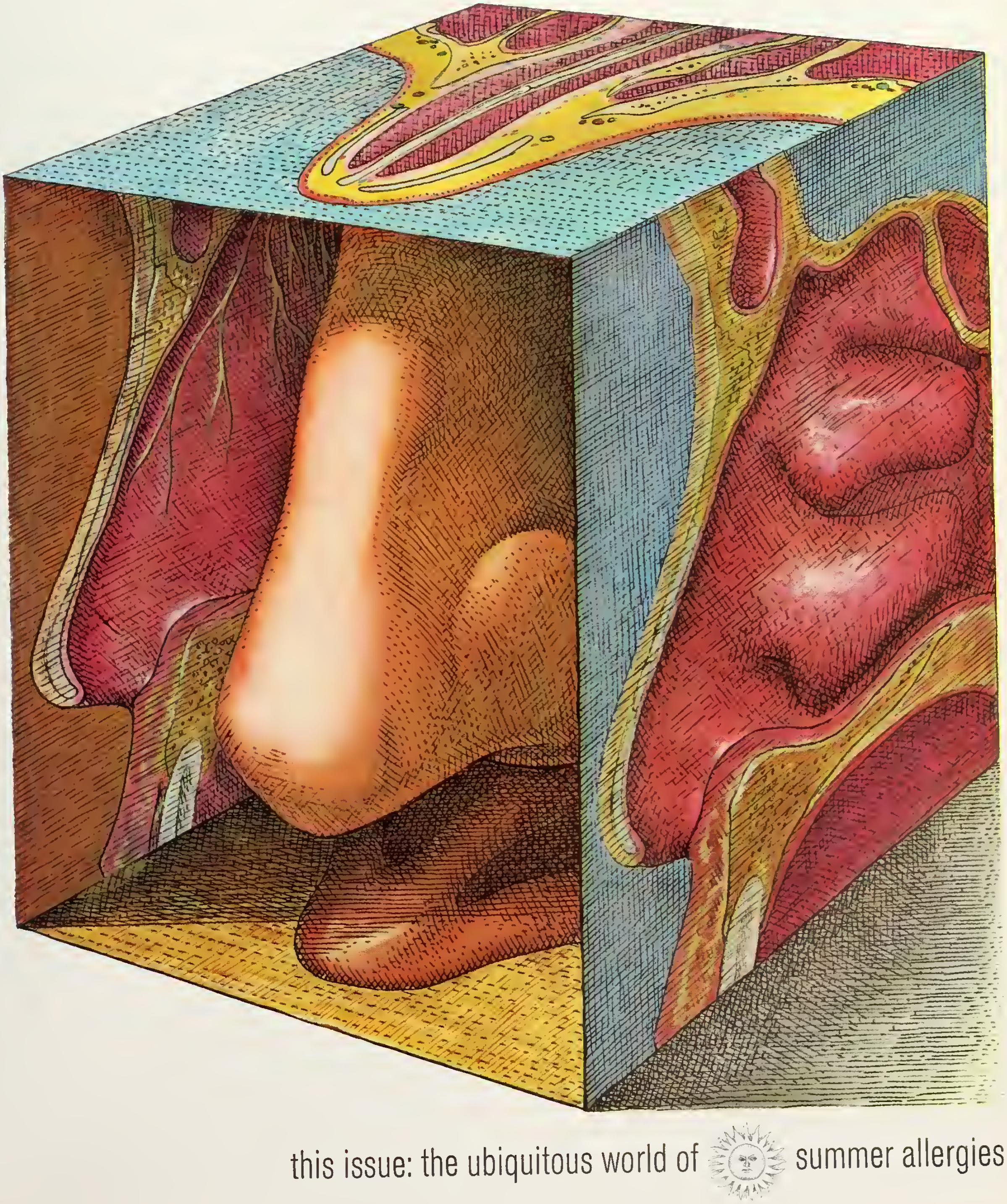
spring 1967

DORSEY Season

A journal within a journal published quarterly in the interests of better medicine by Dorsey Laboratories, a division of The Wander Company, Lincoln, Nebraska. Address communications to Raymond C. Pogge, M.D., Director of Medicine.



this issue: the ubiquitous world of summer allergies

the ubiquitous world of summer allergies

Donald L. Unger, M.D. • Clinical Assistant Professor, Department of Medicine (Allergy), Stritch School of Medicine (Loyola).

In the Spring a young man's fancy lightly turns to thoughts of—allergies. This is at least true of the 10% of the population who have hay fever and the 4% who have asthma.[1] The snow melts, the trees blossom and the noses run. Patients who were fine all winter may not be enthralled by the sight of the first robin or the blossoming of a crocus, for their appearances may precede the "sneezin' season."

Allergies in general can be divided into winter allergies and summer allergies. In the winter the main problems are inside the house: e.g. dogs, cats, dust and feathers. Houses in the northern half of the country become so dry that it becomes essential to add humidity to the home; this is a far cry from the damp summer months with the moldy basements and need for dehumidifiers.

Early in April trees begin to pollinate, with each tree having about a two week period of pollination. A particular patient may be sensitive to only one tree and thus have his hay fever for such a short time that he thinks he has a cold.[2] The entire tree season starts about April 1 and ends about Memorial Day, although all hay fever seasons are blurred and prolonged in the southern part of the country. Tree pollen is usually very heavy and a person may well have most of his exposure from those trees immediately surrounding his home.

Grasses pollinate from about May 15 until July 4, and cause "rose fever." Grass pollens are somewhat lighter and more buoyant than tree pollens, and are much more ubiquitous. While there are several varieties of grasses in the United States, they are so closely related antigenically that a person sensitive to one is generally sensitive to them all.[3] Thus, while the tree season is really several small seasons intertwined, the grass season will usually result in symptoms for a more prolonged period. Obviously, a grass-sensitive patient will have trouble only when grass is pollinating—he will have to think of another excuse not to mow the lawn after July 4.

Ragweed is the "Big Daddy" of them all in the eastern two-thirds of the country. Pollination is generally from mid-August until the end of September, with the predicted lower counts and longer seasons

in the southern part of the country. Ragweed is a very light pollen which may be windborne for hundreds of miles. An interesting study was made in New York City, in which 90% or more of the ragweed plants were destroyed in three of the five boroughs; pollen counts done during the season were virtually identical in all five.[4]

Ragweed is, of course, the most common cause of hay fever and is associated with an incredible loss of man hours from work each year. Many is the patient who travels to areas where the pollen count is low, just to avoid having symptoms. There is no ragweed anywhere in the world except the United States and portions of Canada and Mexico.

While molds are present through the year, the most important ones predominate from April until November. An old wives' tale has ragweed ending with the first frost, when actually it ends a good month earlier. It is Alternaria—the kingpin of the molds—that meets a sudden demise with the first frost. Alternaria-sensitive patients are in their glory when there is snow on the ground, and might be ideally suited to man the radar stations in Alaska. In September and October, Alternaria counts are at their highest, perhaps associated with the burning of leaves. Other molds such as Hormodendrum and Helminthosporium are associated with the warmer weather, as opposed to Penicillium and Aspergillus which are household molds.

Summer also means the return of our much maligned associates—bugs. Insects cause allergic symptoms by two methods: the bite or sting of the Hymenoptera group, and the inhalation of particles of the bodies of various insects. Wasp stings are the oldest known form of allergy, as they caused the death of one of the pharaohs in ancient Egypt.[5] Bees, wasps and hornets account for many deaths in this country, and those sensitive to them should carry special treatment kits at all times; a few minutes delay in the administration of epinephrine to such a patient, might be the difference between life and death. Inhalation of particles of insects may cause sneezing and wheezing in a susceptible individual.[6] Both of these forms of insect allergy may be benefitted by hyposensitization.

The insect recognizes no professional bounds. He is as apt to bite the physician as the patient. So this season, beware of bugs. And beware, too, of poison ivy. That pleasant stroll through the woods and underbrush with the Boy Scouts might turn into a

(Concluded on following page)

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nightmare for the botanically uninitiated in the causes of rhus dermatitis (poison ivy, poison oak and poison sumac). Although you may have been careful, your dog may not have noted that it wasn't clover he jumped through, but poison ivy. His return to your side may give you the rhus dermatitis that you so carefully avoided. That heavenly campfire may be emitting particles of rhus oil to produce an airborne contact dermatitis of the exposed areas of the body.

another fascinating, but rather infrequent type of summer allergy is physical allergy. Some people sneeze on exposure to sunlight, while others break out in rashes, usually on the exposed parts of the body. These rashes may well follow the administration of various photosensitizing drugs, e.g. demethylchlortetracycline.[7] Another form of physical allergy and one that may be lethal in the summer, is cold allergy. Yes, I mean cold allergy, not heat allergy. The cool dip on a hot day with its consequent sudden chilling of the body, may be the coup de grace for a cold sensitive patient.[8] It is customary to write "heart attack" on the death certificate, even though the victim may have been an 18-year-old boy who looks like a Greek god.

Lest the reader be depressed by this saga of afflictions associated with the warmer months, perhaps he should remember that it is also a time for swimming, baseball, lying in the sun and taking that long-planned vacation. So let's all join in a chorus of "In the Good Old Summertime," as we sneeze, wheeze and scratch. Be careful of your suntan lotion, however; it may cause you a contact dermatitis.

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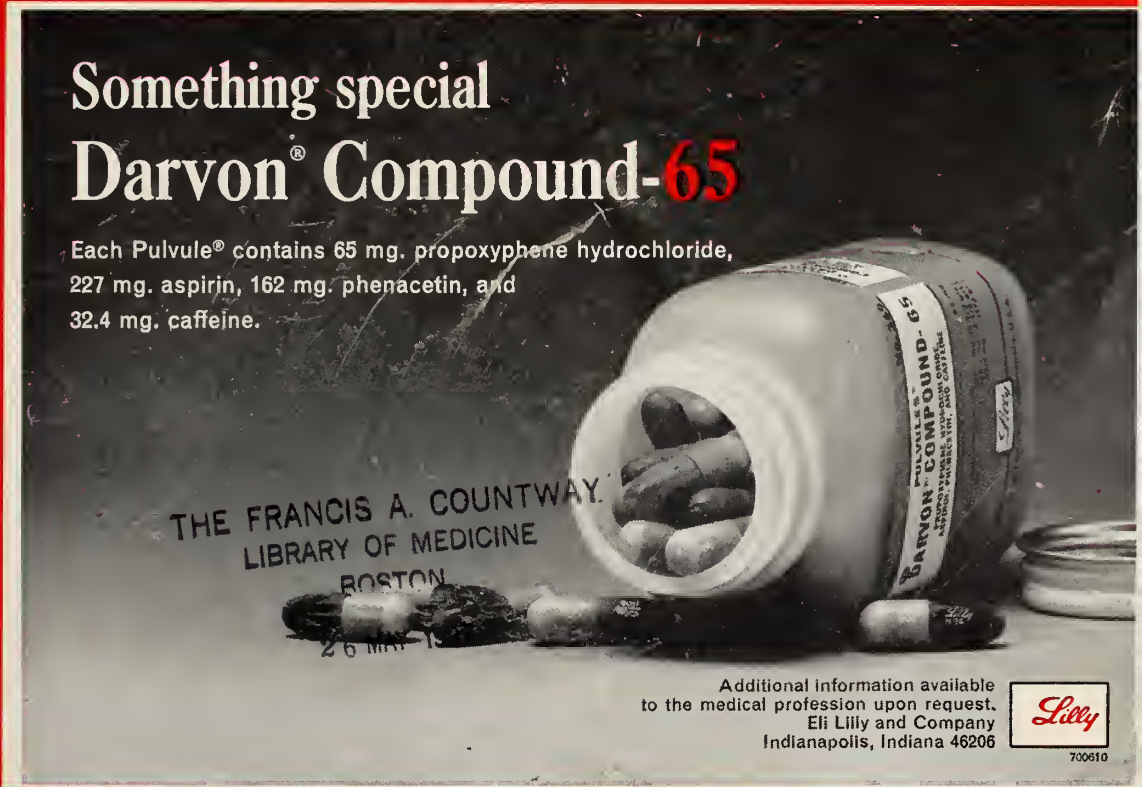

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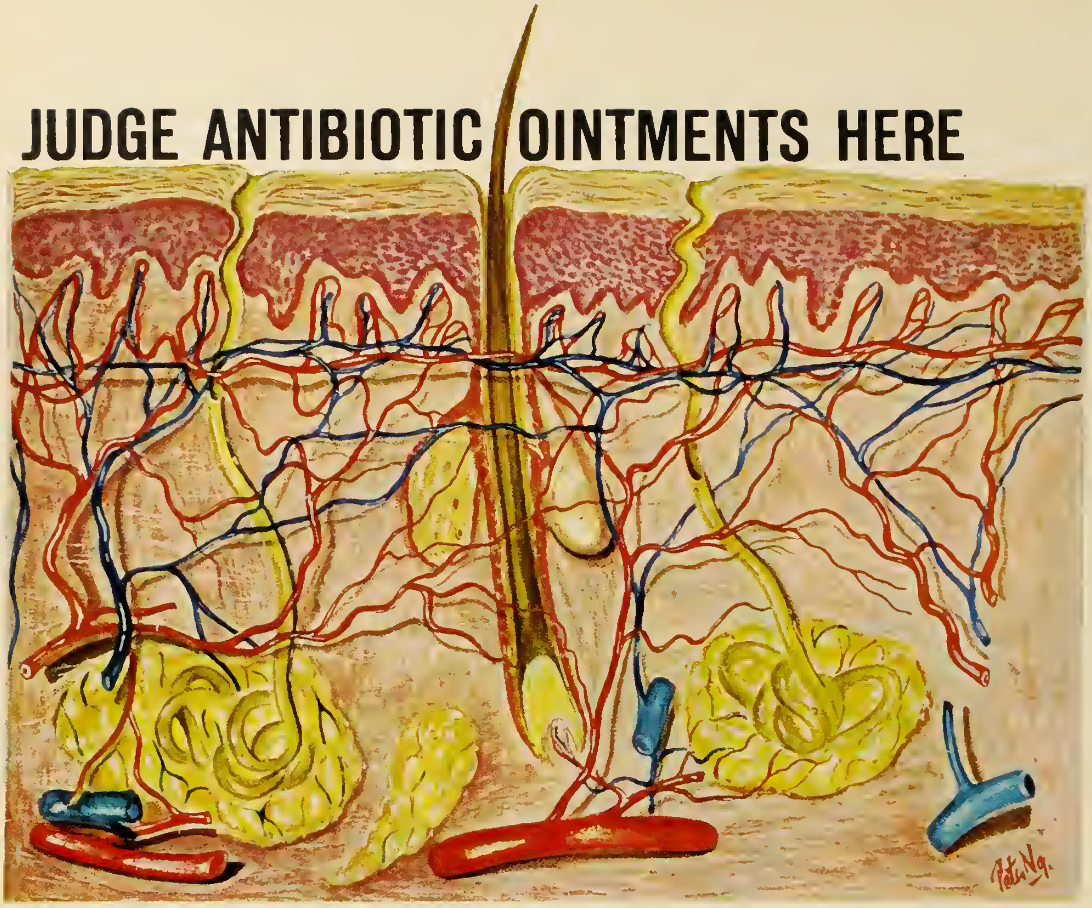

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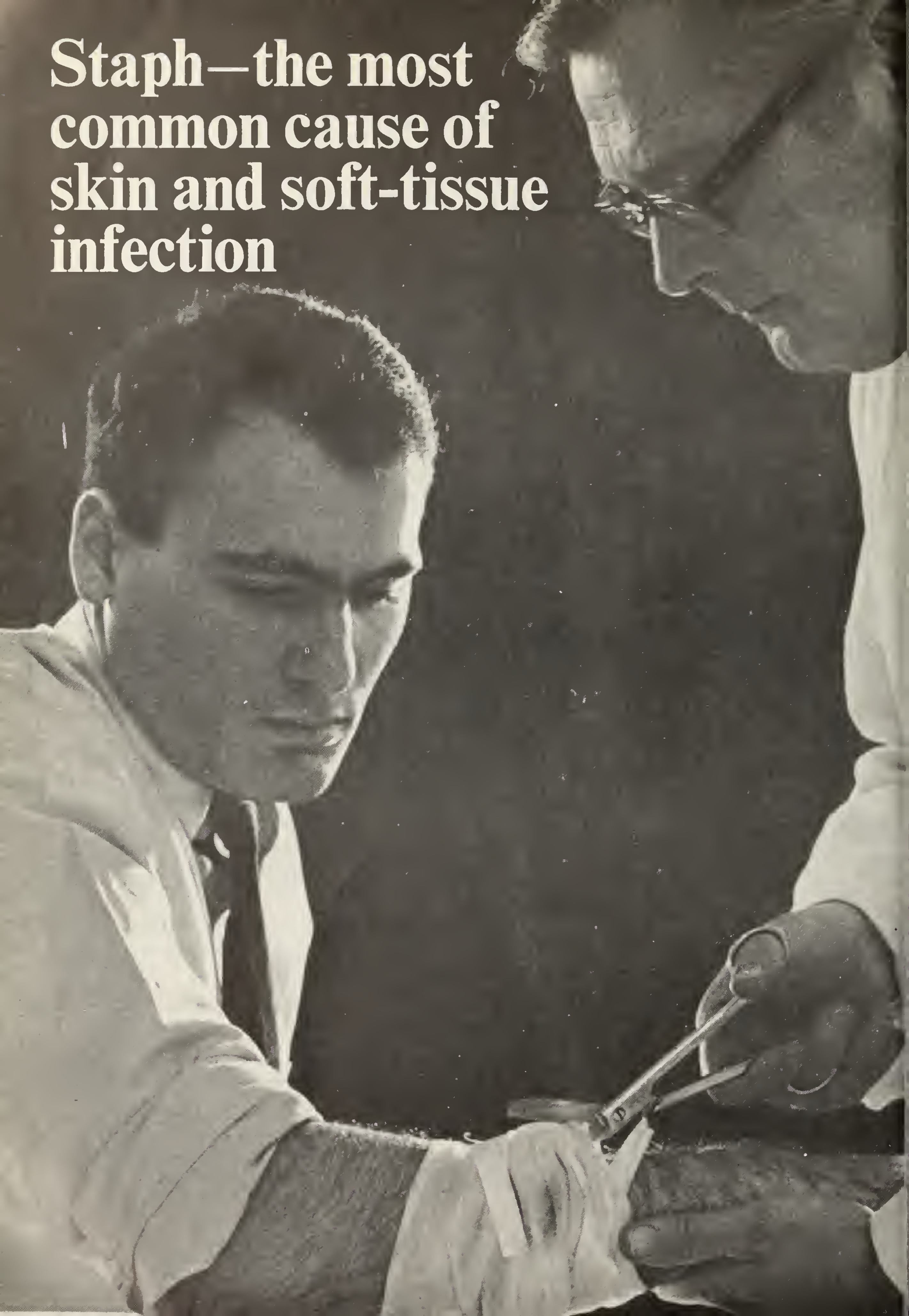

Staph—the most common cause of skin and soft-tissue infection

.reliably controlled with specific therapy

A suitable dosage form for every staph situation

Staph—the most common cause of skin and soft-tissue infection—also is responsible for many more serious infections, such as pneumonia, osteomyelitis, and septicemia. Often, a seemingly minor skin infection is the source of metastatic spread to deeper structures. When findings on culture incriminate staph as the cause, Prostaphlin (sodium oxacillin) will provide specific effective therapy.

Bactericidal effectiveness. Hardly a staph organism can resist the bactericidal action of Prostaphlin (sodium oxacillin), as shown by a 34-month *in vitro* study. Of all staph isolates tested, 99.5% were sensitive to oxacillin.[1]

Clinically proven. There is a high correlation between these *in vitro* findings and clinical results. Of 610 patients treated with Prostaphlin (sodium oxacillin), 89.8% were reported cured or improved, including those with staph infections resistant to penicillin G.[2] And since resistance does not appear to develop *in vivo,* therapy with oxacillin can be extended when necessary.

Outstanding safety record. Besides being staph-specific and rapidly absorbed—Prostaphlin (sodium oxacillin) has established an outstanding record of safety during five years of widespread clinical use. Continuous high blood levels of oxacillin have not produced toxic effects on kidney function, assuring a significant margin of safety. However, as with all penicillins, the possibility of allergic response should be considered.

Capsules, Oral Solution and Injectable. Prostaphlin (sodium oxacillin) is available in three flexible dosage forms to suit the age of the patient and severity of infection—capsules, an oral solution for pediatric use, and multi-dose vials for injection, I.M. or I.V.

PRESCRIBING INFORMATION: For complete information, consult Official Package Circular. *Indications:* Infections caused by Staphylococci, particularly those due to penicillin G-resistant Staphylococci. *Contraindications:* A history of severe allergic reactions to penicillin. *Precautions:* Typical penicillin-allergic reactions may occur. Safety for use in pregnancy and premature infants is not established. Because of limited experience, use cautiously and evaluate organ system function frequently in neonates. Mycotic or bacterial superinfections may occur. Assess renal, hematopoietic and hepatic function intermittently during long-term therapy. *Adverse Reactions:* Skin rashes, pruritus, urticaria, eosinophilia, nausea, vomiting, diarrhea, fever and occasional anaphylaxis. Rare cases of reversible hepatocellular dysfunction have occurred. Moderate SGOT elevations have been noted. Thrombophlebitis has occurred occasionally during intravenous therapy and leukopenia was noted in two cases. *Usual Oral Dosage:* Adults: 500 mg. *q.*4 or *q.6h*. Children: 50 mg./Kg./day. *Usual Parenteral Dosage:* Adults: 250-500 mg. *q.*4 or *q.6h*. Children: 50 mg./Kg./day. Treat beta-hemolytic streptococcal infections for at least 10 days. Give oral drug 1 to 2 hours before meals. *Supplied:* Capsules—250 and 500 mg. in bottles of 48. Injectable—250 mg., 500 mg., and 1 Gm. dry filled vial for I.M./I.V. use. For Oral Solution—100 ml. bottle, 250 mg./5 ml. when reconstituted. **A.H.F.S. CATEGORY: 8:12.6**

References: 1. Abstracted from *Antibiotic Sensitivity of Staphylococci Studied from November 1962 through August 1965,* reported by Griffith, L.J., Staphylococcus Reference Laboratory, V.A. Hospital, Batavia, N.Y. 2. Data on file, Bristol Laboratories.

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SODIUM OXACILLIN

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3000 UNIT TABLETS

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In controlling abnormal uterine activity, LUTREXIN, the non-steroid "uterine relaxing factor" has been found to be the drug of choice by many clinicians.

No side effects have been reported, even when massive doses (25 tablets per day) were administered.

Literature on indications and dosage available on request.

Supplied in bottles of twenty-five 3,000 unit tablets.

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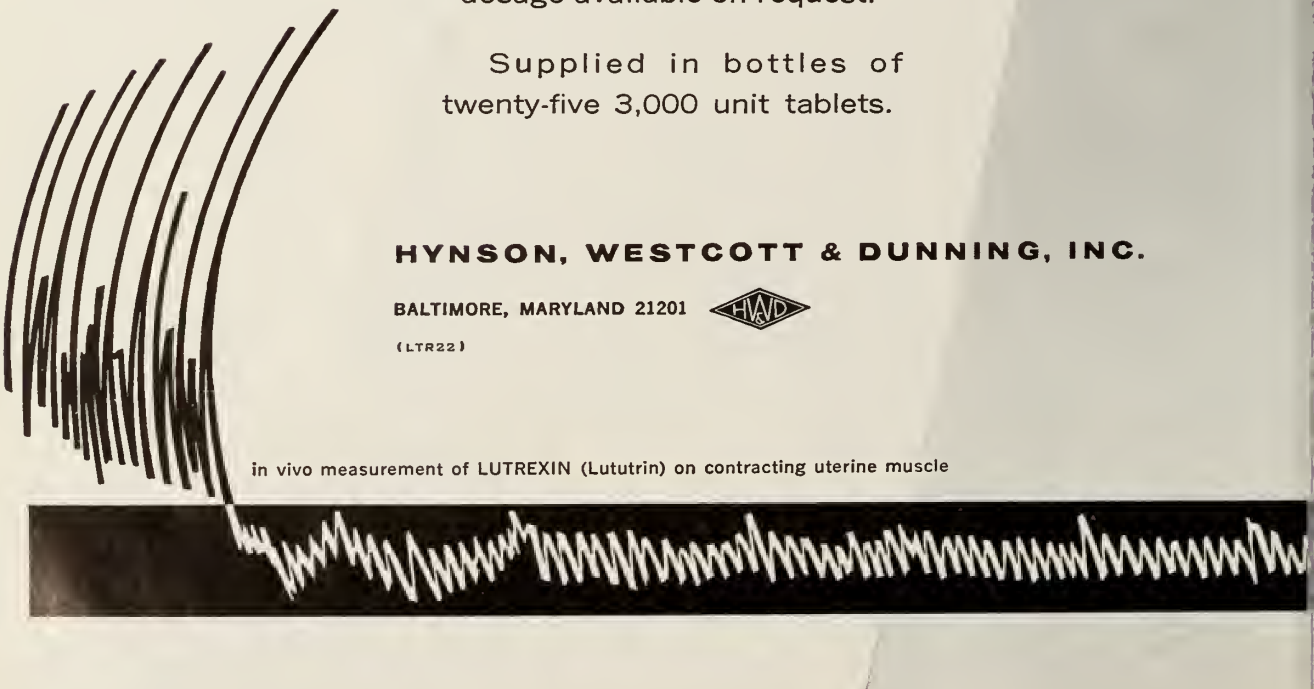
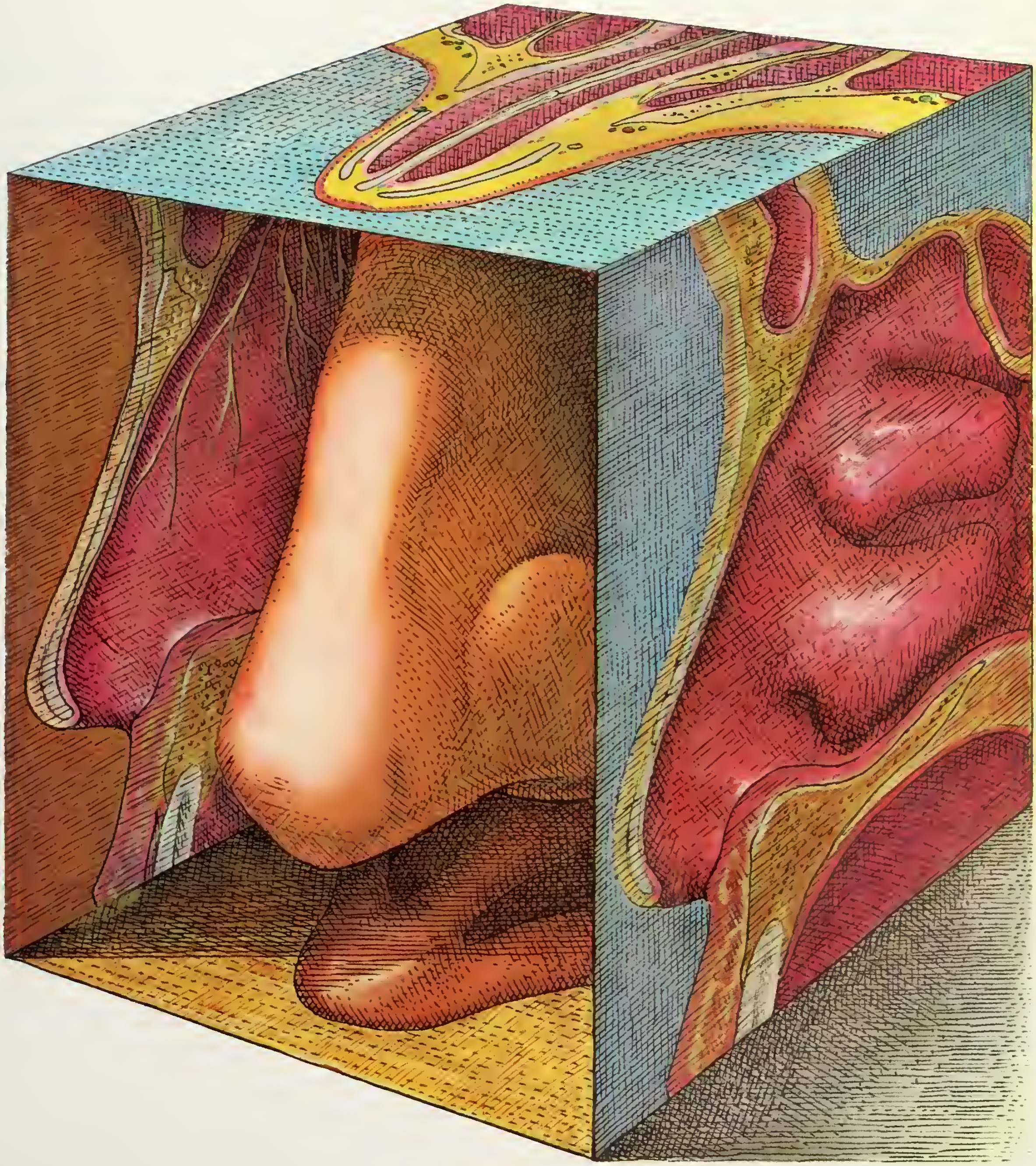


in vivo measurement of LUTREXIN (Lututrin) on contracting uterine muscle

spring 1967

DORSEY Season

A journal within a journal published quarterly in the interests of better medicine by Dorsey Laboratories, a division of The Wander Company, Lincoln, Nebraska. Address communications to Raymond C. Pogge, M. D., Director of Medicine.



this issue: the ubiquitous world of summer allergies

the ubiquitous world of summer allergies

Donald L. Unger, M.D. • Clinical Assistant Professor, Department of Medicine (Allergy), Stritch School of Medicine (Loyola).

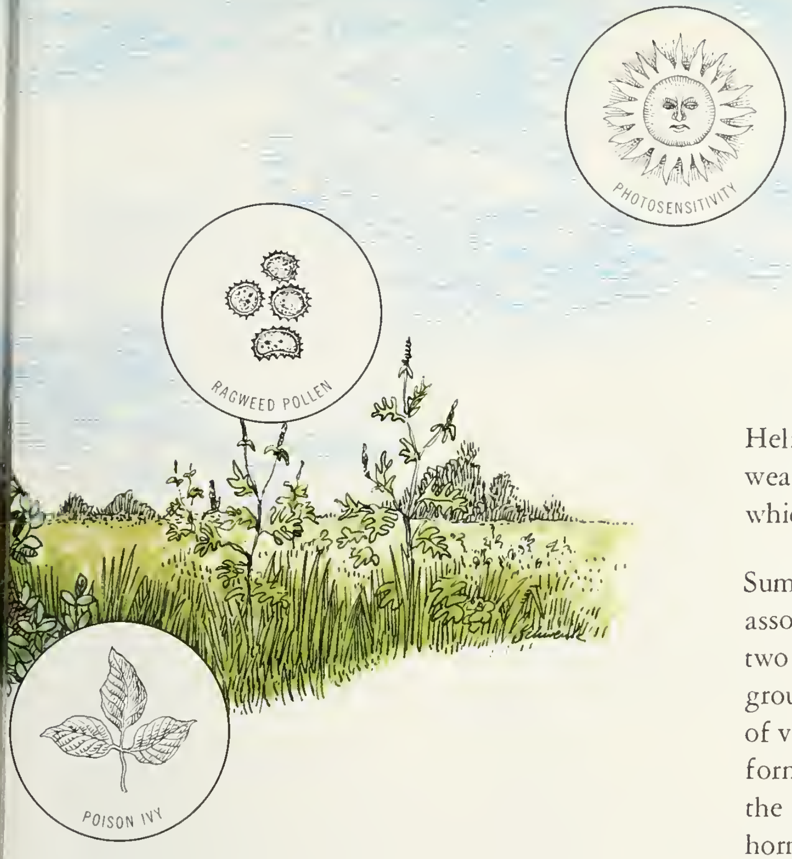
In the Spring a young man's fancy lightly turns to thoughts of—allergies. This is at least true of the 10% of the population who have hay fever and the 4% who have asthma.[1] The snow melts, the trees blossom and the noses run. Patients who were fine all winter may not be enthralled by the sight of the first robin or the blossoming of a crocus, for their appearances may precede the "sneezin' season."

Allergies in general can be divided into winter allergies and summer allergies. In the winter the main problems are inside the house: e.g. dogs, cats, dust and feathers. Houses in the northern half of the country become so dry that it becomes essential to add humidity to the home; this is a far cry from the damp summer months with the moldy basements and need for dehumidifiers.

Early in April trees begin to pollinate, with each tree having about a two week period of pollination. A particular patient may be sensitive to only one tree and thus have his hay fever for such a short time that he thinks he has a cold.[2] The entire tree season starts about April 1 and ends about Memorial Day, although all hay fever seasons are blurred and prolonged in the southern part of the country. Tree pollen is usually very heavy and a person may well have most of his exposure from those trees immediately surrounding his home.

Grasses pollinate from about May 15 until July 4, and cause "rose fever." Grass pollens are somewhat lighter and more buoyant than tree pollens, and are much more ubiquitous. While there are several varieties of grasses in the United States, they are so closely related antigenically that a person sensitive to one is generally sensitive to them all.[3] Thus, while the tree season is really several small seasons intertwined, the grass season will usually result in symptoms for a more prolonged period. Obviously, a grass-sensitive patient will have trouble only when grass is pollinating—he will have to think of another excuse not to mow the lawn after July 4.

Ragweed is the "Big Daddy" of them all in the eastern two-thirds of the country. Pollination is generally from mid-August until the end of September, with the predicted lower counts and longer seasons



in the southern part of the country. Ragweed is a very light pollen which may be windborne for hundreds of miles. An interesting study was made in New York City, in which 90% or more of the ragweed plants were destroyed in three of the five boroughs; pollen counts done during the season were virtually identical in all five.[4]

Ragweed is, of course, the most common cause of hay fever and is associated with an incredible loss of man hours from work each year. Many is the patient who travels to areas where the pollen count is low, just to avoid having symptoms. There is no ragweed anywhere in the world except the United States and portions of Canada and Mexico.

While molds are present through the year, the most important ones predominate from April until November. An old wives' tale has ragweed ending with the first frost, when actually it ends a good month earlier. It is Alternaria—the kingpin of the molds—that meets a sudden demise with the first frost. Alternaria-sensitive patients are in their glory when there is snow on the ground, and might be ideally suited to man the radar stations in Alaska. In September and October, Alternaria counts are at their highest, perhaps associated with the burning of leaves. Other molds such as Hormodendrum and Helminthosporium are associated with the warmer weather, as opposed to Penicillium and Aspergillus which are household molds.

Summer also means the return of our much maligned associates—bugs. Insects cause allergic symptoms by two methods: the bite or sting of the Hymenoptera group, and the inhalation of particles of the bodies of various insects. Wasp stings are the oldest known form of allergy, as they caused the death of one of the pharaohs in ancient Egypt.[5] Bees, wasps and hornets account for many deaths in this country, and those sensitive to them should carry special treatment kits at all times; a few minutes delay in the administration of epinephrine to such a patient, might be the difference between life and death. Inhalation of particles of insects may cause sneezing and wheezing in a susceptible individual.[6] Both of these forms of insect allergy may be benefitted by hyposensitization.

The insect recognizes no professional bounds. He is as apt to bite the physician as the patient. So this season, beware of bugs. And beware, too, of poison ivy. That pleasant stroll through the woods and underbrush with the Boy Scouts might turn into a

(Concluded on following page)

to relieve summer allergies

Triaminic®

Each timed-release tablet contains phenylpropanolamine hydrochloride 50 mg., pheniramine maleate 25 mg. and pyrilamine maleate 25 mg.

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nightmare for the botanically uninitiated in the causes of rhus dermatitis (poison ivy, poison oak and poison sumac). Although you may have been careful, your dog may not have noted that it wasn't clover he jumped through, but poison ivy. His return to your side may give you the rhus dermatitis that you so carefully avoided. That heavenly campfire may be emitting particles of rhus oil to produce an airborne contact dermatitis of the exposed areas of the body.

Another fascinating, but rather infrequent type of summer allergy is physical allergy. Some people sneeze on exposure to sunlight, while others break out in rashes, usually on the exposed parts of the body. These rashes may well follow the administration of various photosensitizing drugs, e.g. demethylchlortetracycline.[7] Another form of physical allergy and one that may be lethal in the summer, is cold allergy. Yes, I mean cold allergy, not heat allergy. The cool dip on a hot day with its consequent sudden chilling of the body, may be the coup de grace for a cold sensitive patient.[8] It is customary to write "heart attack" on the death certificate, even though the victim may have been an 18-year-old boy who looks like a Greek god.

Lest the reader be depressed by this saga of afflictions associated with the warmer months, perhaps he should remember that it is also a time for swimming, baseball, lying in the sun and taking that long-planned vacation. So let's all join in a chorus of "In the Good Old Summertime," as we sneeze, wheeze and scratch. Be careful of your suntan lotion, however; it may cause you a contact dermatitis.

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How can he be a sport with a runny nose?

For summer allergies, summer colds, or nasal congestion due to almost any cause, you prescribe quick r-e-l-i-e-f with Triaminic. It's ideal for summer allergies:

1. Acts in 15-30 minutes due to decongestant.
2. Follows up with balanced dual antihistamines.
3. Up to 24-hour 'round the clock relief when dosed one tablet at morning, mid-afternoon and evening.

Summer time is sport time and who can be a sport with a runny nose?

provide patient comfort

Triaminic® relieves summer allergies

Each timed-release tablet contains:

Phenylpropanolamine hydrochloride	50 mg.
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Side effects: Occasional drowsiness, blurred vision, cardiac palpitation, flushing, dizziness, nervousness or gastrointestinal upsets.

Precautions: The patient should be advised not to drive a car or operate dangerous machinery if drowsiness occurs. Use with caution in patients with hypertension, heart disease, diabetes or thyrotoxicosis.

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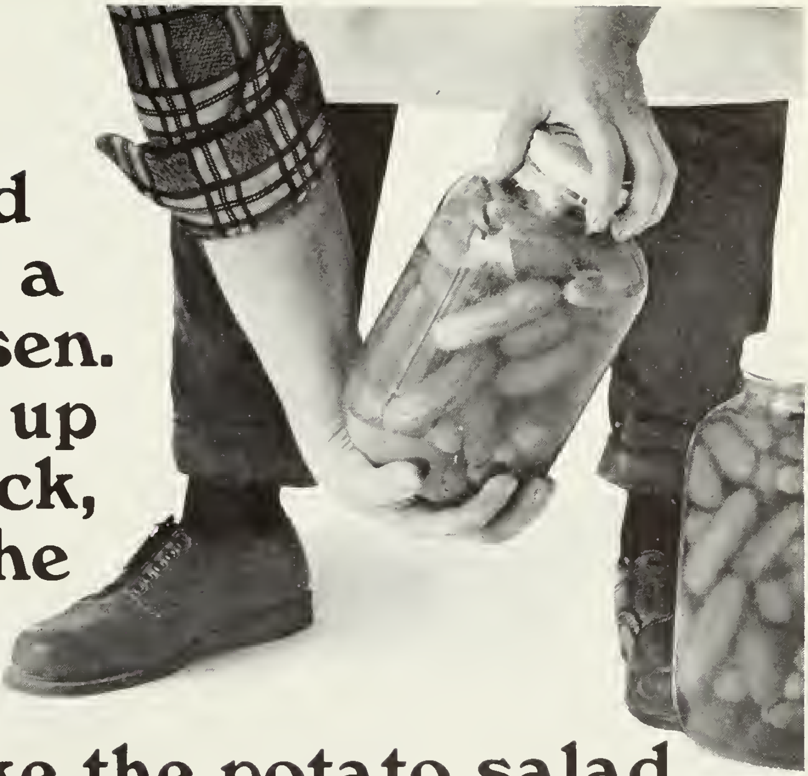
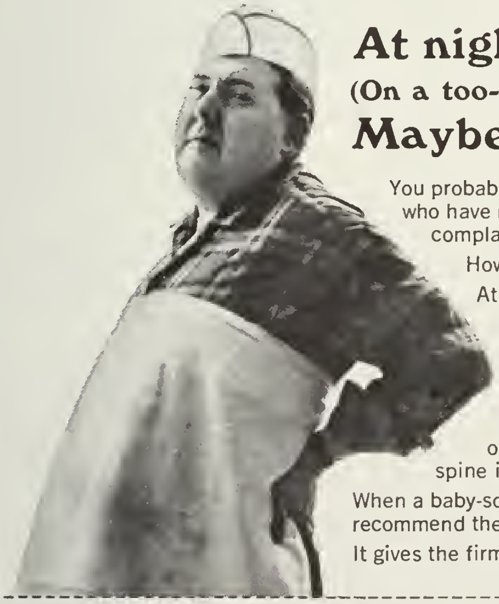


Bill Wold owns a delicatessen. He puts up stock, unloads the produce, even helps make the potato salad.



At night he sleeps like a baby.
(On a too-soft mattress)
Maybe that's why his back hurts.

You probably have patients who are strong as a bull—who have no postural defects or spinal deformities—yet still complain of low back pains.

How can this happen to otherwise normal, healthy people?

At night, they may be sleeping like babies—on nice, soft, feathery mattresses that can do more harm than good. And this too-soft mattress can lead to morning backaches.

That's why so many doctors recommend (and sleep on!) the Sealy Posturepedic.

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When a baby-soft mattress is giving patients low back pain, why not recommend the Sealy Posturepedic?

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We believe your personal use will convince you of the Posturepedic's distinctive benefits and, we would hope, merit your valued recommendation.

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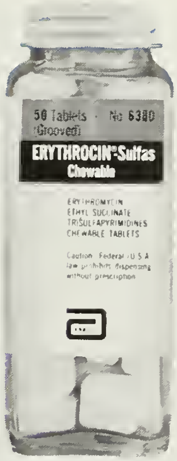
Perhaps there have been times when you wanted to prescribe erythromycin and triple sulfas for little patients. Now you can—with a choice of two new fine-tasting pediatric forms.

New–Two Pediatric Forms of Erythromycin and Triple Sulfas



ERYTHROCIN®-SULFAS Chewable

(Erythromycin ethyl succinate-trisulfapyrimidines chewable tablet)

In clinical trials[1,2], this orange-flavored tablet was given to 55 patients, aged four months to 18 years.

Diagnoses (multiple in some cases) represented a cross section of bacterial infections commonly seen in pediatric office practice.

Therapy was given from three to 12 days, with an average of six days.

Of the 55 patients, 30 were reported cured within 72 hours, while 22 showed partial recovery within the same time, and subsequent clinical cure.

A clinical cure rate of 94.5%

ERYTHROCIN®-SULFAS Granules

(Erythromycin ethyl succinate-trisulfapyrimidines granules for oral suspension)

87 patients were treated[1,2]—all children, ages four months to 15 years.

The diagnoses were multiple in some cases and were chiefly bacterial infections of the respiratory tract.

Dosage was maintained from three to 10 days; average treatment was five days. All of the ill children accepted the orange-flavored suspension favorably.

53 were clinically cured within 72 hours, while 32 showed partial relief within the same time, and subsequent clinical cure.

701358

A clinical cure rate of 97.7%

ABBOTT

Brief Summary on next page

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1. Case Reports on File, Dept. Clin. Development, Abbott Laboratories.
2. Polley, R.F.L., Use of Erythromycin-Sulfas in Office Practice, Western Med., 7:177, July, 1966.

ERYTHROCIN®-SULFAS
Brief Summary

Contraindications: Known sensitivity to erythromycin or sulfonamides. Because of the possibility of kernicterus with sulfonamides, do not use in pregnancy at term, premature or newborn infants.

Warnings: As with other forms of sulfonamide therapy, carefully evaluate patients with liver or kidney damage, urinary obstruction, or blood dyscrasia. Deaths have been reported from hypersensitivity reactions and blood dyscrasias following use of sulfonamides. Perform blood counts and liver and kidney function tests if used repeatedly at close intervals or for long periods.

Precautions, Side Effects: Occasionally mild abdominal discomfort, nausea or vomiting may occur with erythromycin, generally controlled by reduction of dosage. Mild allergic reactions (such as urticaria and other skin rashes) may occur. Serious allergic reactions have been extremely infrequent. Use sulfonamides with caution in patients with a history of allergy. Assure adequate fluid intake to prevent crystalluria and institute alkali therapy if indicated. If overgrowth of nonsusceptible organisms occurs, withdraw the drug and institute appropriate treatment. If a patient should show signs of hypersensitivity, appropriate countermeasures (e.g. epinephrine, steriods, etc.) should be administered and the drug withdrawn.

Adverse Reactions: Sulfonamide therapy may be associated with headache, nausea, vomiting, urticaria, diarrhea, hepatitis, pancreatitis, blood dyscrasias, neuropathy, drug fever, skin rash, injection of the conjunctiva and sclera, petechiae, purpura, hematuria and crystalluria.

Side effects due to erythromycin are infrequent, but occasional abdominal discomfort, nausea, or vomiting, urticaria and other skin rashes may occur.

Supplied: The Granules for Oral Suspension come in bottles of 60 ml. and 150 ml. The Chewable tablets are in bottles of 50. Each 5-ml. teaspoonful of reconstituted Granules or each Chewable tablet provides erythromycin ethyl succinate equivalent to 125 mg. of erythromycin activity and 167 mg. of each of sulfadiazine, sulfamerazine and sulfamethazine.

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Tandearil®
oxyphenbutazone

Tandearil in Painful Shoulder

Therapeutic Effects: Stiffness and pain may diminish within 2 days, and full mobility may be restored within a week. These effects are obtained with oxyphenbutazone alone or combined with physiotherapy or local hormonal injections. The drug is usually well tolerated and does not affect pituitary-adrenal function or immune response.

Contraindications: Edema; danger of cardiac decompensation; history or symptoms of peptic ulcer; renal, hepatic or cardiac damage; history of drug allergy; history of blood dyscrasia. The drug should not be given when the patient is senile or when other potent drugs are given concurrently.

Warning: If coumarin-type anticoagulants are given simultaneously, watch for excessive increase in prothrombin time. Pyrazole compounds may potentiate the pharmacologic action of sulfonylurea, sulfonamide-type agents and insulin. Carefully observe patients receiving such therapy. Use with great caution in the first trimester of pregnancy.

Precautions: Obtain a detailed history and a complete physical and laboratory examination, including a blood count. The patient should be closely supervised and should be warned to report immediately fever, sore throat, or mouth lesions (symptoms of blood dyscrasia); sudden weight gain (water retention); skin reactions; black or tarry stools or other evidence of intestinal hemorrhage. Make regular blood counts. Discontinue the drug and institute countermeasures if the white count changes significantly, granulocytes decrease, or immature forms appear. Use greater care in the elderly and in hypertensives.

Adverse Reactions: The most common are nausea, edema and drug rash. The drug has been associated with peptic ulcer and may reactivate a latent peptic ulcer. Infrequently, agranulocytosis, or a generalized allergic reaction may occur and require withdrawal of medication. Stomatitis, salivary gland enlargement, vomiting, vertigo and languor may occur. Leukemia and leukemoid reactions have been reported but cannot definitely be attributed to the drug. Thrombocytopenic purpura and aplastic anemia may occur. Confusional states, agitation, headache, blurred vision, optic neuritis and transient hearing loss have been reported, as have hyperglycemia, hepatitis, jaundice, and several cases of anuria and hematuria. With long-term use, reversible thyroid hyperplasia may occur infrequently. Moderate lowering of the red cell count due to hemodilution may occur.

Dosage in Painful Shoulder: 600 mg. daily in divided doses for 2 to 3 days; 300 mg daily thereafter. Usual duration of therapy: 2 to 7 days.

Availability: Tablets of 100 mg. 6562-VI(B)R

For complete details, please refer to full prescribing information.

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Tandearil®
oxyphenbutazone

helps painful shoulders move again

3 out of 4 painful shoulder patients responded well

Sperling, I L
Applied Therap. 6:117, 1964

84.2% of 127 patients

Rosenbaum, E. E., and
Schwarz, G. R. North-
west Med. 61:927, 1962

81% of 48 patients

Please see adjoining page for brief prescribing summary.

TA-5094PC

Why these 7 patients with moderate to severe anxiety may respond better to Mellaril

1. The agitated patient.

Anxiety—particularly that beyond the range of minor tranquilizers—frequently is expressed as gross motor restlessness, fidgetiness and purposeless movements, and may erupt into aggressive behavior. Mellaril is almost a specific for those patients whose anxiety follows such a pattern.

2. The psychosomatic patient.

The family physician is rarely given the diagnostic luxury of a classic, textbook "anxiety state." Most often he must probe for anxiety masked by a functional disorder—or which exacerbates a somatic problem. Double-blind evaluations have demonstrated that Mellaril can be a significant adjunct in the treatment of such patients.

3. The patient under situational stress.

Mellaril helps the patient deal with stresses of everyday life. Nonhabituating, it can be given for extended periods of time. It does not "separate" the patient from practical problems and pressures, does not induce euphoria or a fuzziness which can compromise the ability to cope with realities. Rather, it helps the patient move more competently in his daily world by eliminating useless tension, by allowing him to conserve emotional resources and energies, and to direct them against the problems really worth worrying about.

4. The menopausal patient.

The woman who sees change of life as the end of useful life requires support from both family and family physician. Whether the psychological impact of menopause is directly related to hormonal changes, or merely coincidental, is debatable, but estrogenic therapy is frequently inadequate. Mellaril is a useful aid for these patients and, alone, or in combination with reduced estrogen dosage, will help ease the menopausal misery.

5. The previously hospitalized psychiatric patient.

Such a patient may still require the type of medication he has been accustomed to, but because he is no longer in a controlled setting the acceptable level of adverse reactions must be lower. In such circumstances Mellaril is perhaps the drug of choice.

6. The agitated geriatric.

Tranquilizer therapy in the elderly patient always involves special (or at least accentuated) problems: the possibility of drug-induced ataxia, hypotension or depression, for example, assumes an additional significance. These reactions have rarely been observed in geriatric patients treated with Mellaril.

7. The constantly returning patient.

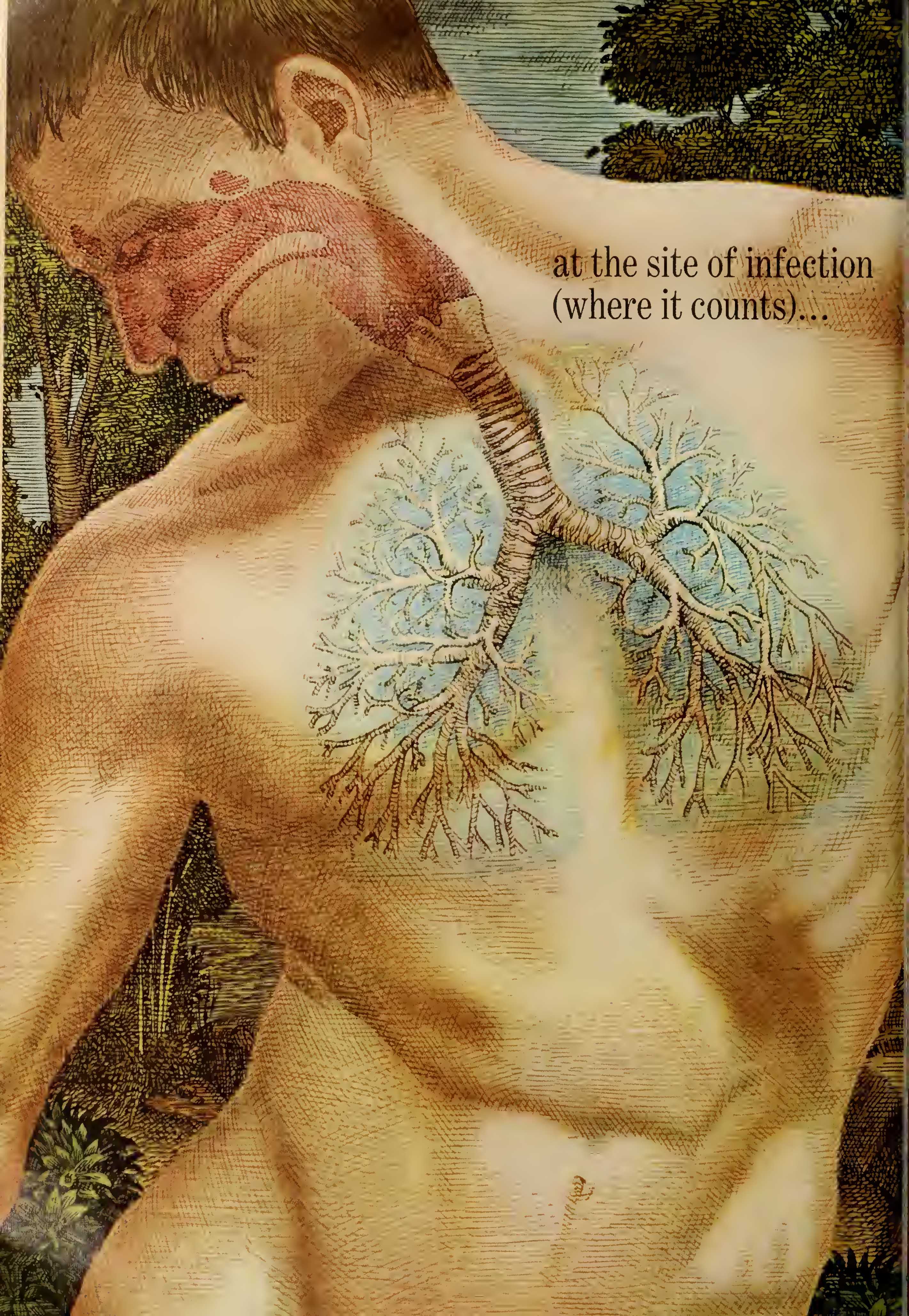
The anxiety patient who has not responded to a minor tranquilizer is not very likely to benefit from your minor tranquilizer of second choice. A major tranquilizer, such as Mellaril, may be indicated in such patients.

Contraindications: Severely depressed or comatose states from any cause, and in association with or following MAO inhibitors; severe hypertensive or hypotensive heart disease.
Precautions: Hypersensitivity reactions (e.g., leukopenia, agranulocytosis) and convulsive seizures are infrequent. Pigmentary retinopathy has been observed where doses in excess of those recommended were used for long periods of time. May potentiate central nervous system depressants, atropine, and phosphorus insecticides. Where complete mental alertness is required, administer the drug cautiously and increase dosage gradually. In addition, orthostatic hypotension (especially in female patients) has been observed. Epinephrine should be avoided in treatment of drug-induced hypotension.
Side Effects: Pseudoparkinsonism and other extrapyramidal disorders are infrequent; drowsiness, especially in high doses early in treatment, may occur; nocturnal confusion, dryness of the mouth, nasal stuffiness, headache, peripheral edema, lactation, galactorrhea, and inhibition of ejaculation are noted on occasion; photosensitivity and other allergic skin reactions may occur but are extremely rare.
Before prescribing, see package insert for full product information.

in moderate to severe anxiety, 25 mg. t.i.d.

Mellaril®
(thioridazine)

SANDOZ


at the site of infection
(where it counts)...

Ilosone® provides more antibacterial activity than any other oral erythromycin

Acid stable, better absorbed . . . Ilosone produces faster, higher, more prolonged blood levels, even in the presence of food[1-3]

Because it is the most active form of oral erythromycin, Ilosone can help assure consistently greater antibacterial activity at the site of infection. Ilosone produces peak antibacterial blood levels two to four times those of other erythromycin preparations.[1,2] Not only are these levels attained earlier, but they are maintained for much longer periods. Even the presence of food does not seem to affect the activity of Ilosone.[1,3]

In the treatment of patients with bacterial infections susceptible to erythromycin, Ilosone has compiled an excellent therapeutic record. Since it exerts its greatest activity against gram-positive organisms, it is particularly useful in common respiratory and soft-tissue bacterial infections. Ilosone kills—not merely inhibits—streptococci, pneumococci, and more strains of staphylococci than any other macrolide antibiotic. This bactericidal action, coupled with the high antibacterial levels attained, makes Ilosone especially valuable in patients with low host resistance, such as infants, debilitated individuals, and diabetics.

Ilosone has shown no cross-resistance with penicillin and may be effective against organisms that have become resistant to that agent. Despite its high antibacterial activity, Ilosone has demonstrated a low incidence of side reactions. Blood dyscrasias, ototoxicity, and tooth staining have not been observed. Infrequent cases of drug idiosyncrasy, manifested by a cholestatic jaundice, have occurred, but there have been no known definite residual effects.

700121

Ilosone®
Erythromycin Estolate

Lilly

(See next page for prescribing information.)

Ilosone®/the most active oral form of erythromycin

Description: Ilosone is the most active form of oral erythromycin that has been developed. Because it is stable in acid, well absorbed, and excreted in lesser amounts in the bile, it provides faster, higher, and longer-lasting levels of antibacterial activity (ABA) in the serum, even when taken with food, than do comparable doses of erythromycin.

Indications: Ilosone is indicated in infections caused by microorganisms sensitive to its action (especially staphylococci, hemolytic streptococci, and pneumococci). The drug is therefore useful in a high proportion of bacterial diseases encountered in clinical practice and particularly in the treatment of bacterial infections of the upper and lower respiratory tract and soft tissues.

In the treatment of acute bacterial pharyngitis and tonsillitis, this antibiotic has promptly eradicated the bacteria (streptococci) and has produced a parallel prompt clinical improvement. There have been no group A beta-hemolytic streptococci resistant to this preparation. In beta-hemolytic streptococcus infections, treatment should be maintained for ten days to prevent the development of rheumatic fever or glomerulonephritis.

Erythromycin estolate has proved to be very effective in pneumococcus pneumonia and in acute bronchitis with pneumococci on culture. Bronchopneumonia and otitis media in children have responded well to its use.

The antibiotic has been used very successfully in staphylococcus infections. Good therapeutic results have been obtained in soft-tissue infections, abscesses, cellulitis, carbuncles, wound infections, and furunculosis.

In serious staphylococcus infections, erythromycin preparations should be used only in combination therapy with other antimicrobial agents. As is the case with any treatment regimen used in these severe conditions, surgical procedures should be performed when indicated, and large dosages of the antimicrobial agents should be employed. In this fashion, Ilosone has been effective in staphylococcus pneumonia, osteomyelitis, septicemia, empyema, and meningitis.

Multiple 500-mg. doses of the drug have been useful in gonorrhea and syphilis. Since penicillin is the drug of choice for the treatment of syphilis and gonorrhea, erythromycin estolate should be employed for these infections only in patients with a history of penicillin allergy. Also, other infections due to susceptible bacteria in patients known to be hypersensitive to penicillin or other antibiotics may be considered for treatment with Ilosone.

Contraindications: Ilosone is contraindicated in patients with a known history of sensitivity to this drug and in those with preexisting liver disease or dysfunction.

Side-Effects: Data obtained from seven years' use of propionyl erythromycin ester and erythromycin estolate (Ilosone) indicate that hepatic dysfunction with or without clinical jaundice may occur during or following courses of therapy with the drug.

Changes in liver function tests in such cases have been indicative of intrahepatic cholestasis. The symptoms appear to be the result of a form of sensitization. The initial symptoms have appeared in some cases after a few days of treatment but generally have followed one or two weeks of continuous therapy or several courses of the drug. Symptoms reappear promptly if the drug is readministered to sensitive patients, usually within forty-eight hours. Eosinophilia was noted in peripheral blood counts. The findings readily subsided without apparent residual effects when treatment was discontinued. Recovery was delayed in one reported instance. The physician indicated in this case that either drug-induced jaundice or viral hepatitis may have been responsible for the findings.

In one clinical study involving ninety-three patients treated with the antibiotic, three cases of jaundice were observed and an additional eleven cases developed some changes in liver function tests. Three of the patients had abnormal liver function tests a second time on readministration of the drug.

Even though it is assumed that not all cases of jaundice have been reported, it seems clear that the number is small compared with the amount of drug that has been used. Reported cases have included persons in whom there had been administered other drugs known to be associated at times with hepatic side-effects and cases in which the presence of viral hepatitis or other disease may have been responsible for the findings. In some of the cases, associated gastro-intestinal symptoms simulated the colic of biliary tract disease. In other instances, clinical symptoms and results of liver function tests resembled findings in extrahepatic obstructive jaundice. It appears that the occurrence of jaundice after administration of Ilosone is infrequent, but further investigations are being made to estimate its incidence more accurately.

In those cases mentioned above in which jaundice appeared to be definitely related to use of the drug, laboratory findings w characterized by increased direct-reacting bilirubin, eleva alkaline phosphatase levels, negative or weakly positive cepha flocculation and thymol turbidity tests, elevated serum glutar oxalacetic transaminase levels, peripheral eosinophilia, and n mal cholecystograms.

Individual idiosyncrasy seems evident since jaundice has been reported in other patients taking prolonged courses of medication. Patients with chronic infection have been given 1 to 2 Gm. of the drug daily for periods of two to six months, a patients with rheumatic fever have taken prophylactic doses 0.5 Gm. daily for two years without difficulty. In one group 144 patients who received the drug daily for two years, no ja dice was noted. It was of interest that members of six of th patients' families, who were not taking the drug, had episo of jaundice during the study period.

Transaminase and serum alkaline phosphatase levels w determined in a group of fifty-four adults and children who to 250 mg. of Ilosone daily for an average of sixteen months rheumatic fever prophylaxis. The results were compared wi those of a similar group of forty-four patients who received p icillin. There were no cases of jaundice in either group. Elevati of SGPT and serum alkaline phosphatase levels during the cou of treatment was observed in one patient treated with Iloso and in two patients treated with penicillin. Seven other patie in the group receiving Ilosone and four others in the penicil group showed elevations in one of the tests at some time duri administration of the drugs.

Very satisfactory therapeutic results, without toxicity, we reported in 102 pediatric patients who received short-term (t day) courses of Ilosone in the treatment of streptococcus inf tions. Results of liver function tests in these patients were co parable to those in a similar control group who had receiv penicillin.

Gastro-intestinal disturbances not associated with hepatic fects are observed in a small proportion of individuals as a res of a local stimulating effect of the medication on the alimenta tract; however, the normal intestinal gram-negative bacter flora is not appreciably altered by erythromycin drugs.

Although allergic manifestations are uncommon with the u of erythromycin, there have been occasional reports of urticar skin eruptions, and, on rare occasions, anaphylaxis.

Administration and Dosage: Ilosone is administered orally.

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For infants and for children under twenty-five pounds of bo weight, the usual dosage is 5 mg. per pound every six hours; f children twenty-five to fifty pounds, 125 mg. every six hou (Tablets Ilosone Chewable should be chewed or crushed a swallowed with water.)

For adults and for children over fifty pounds, the usual dosa of Ilosone is 250 mg. every six hours.

For severe infections, these dosages may be doubled.

When larger doses are indicated, parenteral erythromy therapy should be considered.

In the treatment of syphilis, the recommended total dosage 20 to 30 Gm. given in divided doses for a period of ten to fifte days. Close follow-up of the patient is necessary since eryth mycin drugs have not had adequate evaluation in all stages syphilis. Examinations of spinal fluid are recommended as pa of the follow-up therapy.

For gonorrhea, 500 mg. four times a day for four days a recommended.[3] In the treatment of gonorrhea, patients with suspected lesion of syphilis should have a dark-field examinati before receiving antibiotics, and monthly serologic tests shou be made for a period of three months.

How Supplied: Pulvules Ilosone, Capsules, N.F., 125 and 250 m (equivalent to base), in bottles of 24 and 100.

Tablets Ilosone Chewable, N.F., 125 mg. (equivalent to base in bottles of 50.

Ilosone Drops, 5 mg. (equivalent to base) per drop, in 10-c size packages, with dropper calibrated at 25 and 50 mg.

Ilosone, 125, for Oral Suspension, N.F., 125 mg. (equivale to base) per 5-cc. teaspoonful, in 60 and 150-cc.-size package

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VASCULAR INSUFFICIENCY AND HEBERDEN'S NODES

A POSSIBLE ETIOLOGIC FACTOR

WILLIAM HUNTER, M. D.
Clemson, S. C.

"What are those hard little knobs, about the size of a small pea, which are frequently seen upon the fingers, particularly a little below the top, near the joint? They have no connection with the gout, being found in persons who never had it: they continue for life; and being hardly ever attended with pain, or disposed to become sore, are rather unsightly than inconvenient, though they must be some little hindrance to the free use of the fingers."[1] Thus Heberden described digitorum nodi at the end of the eighteenth century. Rregretfully, we are still looking for the answer to his question, although pathologic joint changes are known to have occurred in prehistoric dinosaurs over 200,000,000 years ago.[2]

Heberden was referring to the osteoarthritic process now known by his name — Heberden's nodes. In patients who have this type of osteoarthritis, there is enlargement of the terminal interphalangeal joint. It involves cartilage and bone, and often results in flexion and deviation deformity.[2] In osteoarthritis the articular cartilage softens, and undergoes fibrillary change. Eventually there is loss of cartilage and the articular surfaces become eburnated. There may be thickening of the synovial membrane and hypertrophy of villous processes. All of this is preceded by submicroscopic alteration in the alignment of collagen fibrils and changes in ground substance. Narrowing of the joint spaces and pseudocyst formation may follow.

The loss of cartilage in the pressure areas is often associated with proliferative changes in the cartilage of the non-pressure areas. In addition to cartilaginous proliferation there are proliferative changes in the vascular bed. Eventually osteocytes appear and the cartilage becomes true bone, forming the familiar osteophytes or bony spurs that are characteristic of the disease. Heberden's nodes are a special case of osteophytic development confined to the distal interphalangeal joints chiefly of the index and middle fingers. Osteophytic changes affecting the proximal interphalangeal joints are referred to as Bouchard's nodes.

These enlargements may be traumatic or idiopathic. Those caused by injury are painful, and there is redness with the swelling. Later, a hard, painless enlargement remains.

In the idiopathic type, swelling may be soft or hard, and it may be complicated by gelatinous synovial cysts. The patient may complain of numbness, tingling, or clumsiness of the fingers.

Although the main discomforts in this particular type of arthritis are related to comparatively minor failures of mobility and function, it is important to the sufferer since it hinders motion and is rather disfiguring. Therefore, the search for a cause and cure has continued. Many causes have been considered. Among them are aseptic necrosis, physiologic stress, infection, metabolic or endocrine disorders, vascular changes, and heredity.

During the nineteenth century, post-mortem material and observations of the living made possible the beginning classification of joint diseases from which recent lists evolved.[4] Hippocrates had remarked on the prevalence of osteoarthritis in the aged.[5] In 1926 Heine[2] reported postmortem examination of 1,002 patients aged 15 to 95 years. He concluded that degenerative arthritis is associated with aging. Hench[2] (1935) believed that degenerative joint disease was present in everyone over 40 years of age, but that only 5 per cent of this group showed clinical symptoms. This general view continued to be held by other investigators.[6] Stecher[7] strongly supports the genetic theory by a detailed study of the familial occurrence of Heberden's nodes. He postulates that the genetic mechanism involves a single autosomal gene, sex influenced, dominant in females and recessive in males. This same author[8] found a relationship between the menopause and the appearance of Heberden's nodes, but felt that this was not a causal relationship but due to the two processes having etiologic factors in common.

One etiologic factor that has been considered is vascular insufficiency. This concept is attractive because of the association of both osteoarthritis and peripheral vascular disease with advancing age. Goldhaft *et al*[12] ligated the arteries to the patellae in a series of dogs and produced changes typical of osteoarthritis. Marshall and his associates[9] have reported a series of 80 patients with hypertrophic osteoarthritis of the hands. These patients were examined by hand arteriography. The majority of the patients showed an occlusive pattern of the digital arteries. The severity of the occlusive digital pattern related to the extent of the bone changes.

Atrophy of the articular cartilage is usually the first bony change in osteoarthritis. The source of nutrition[9, 10] to this cartilage is from the Haversian canal and synovial fluid. Although studies of joint temperature compared to skin temperature have been done,[2] there has been little direct study of circulation in osteoarthritis. Hollander and Horvath[2] believed that temperature changes in the knee joint may be the reverse of skin temperature changes on exposure to hot or cold. Others[2] pointed out a direct agreement between joint and skin temperature in smaller joints.

A fascinating study of temperature effects has been made by Edstrom and his colleagues.[11] They studied arthritic patients kept in a hot room for approximately 100 days. Low oxygen saturation of venous blood in these patients was associated with peripheral vasospasm. Vasospasm ceased in the hot room and oxygen saturation was good. Hemolytic streptococci had been cultured from the throats of 30 of their patients, and the organism could not be found in 26 of them after the stay in the hot room. Also, there was remission of periarticular edema. It is interesting, too, that Hollander and Horvath[13] found that procaine had a vasodilating effect when injected into the joints of some patients, since this drug is so often used as anesthesia before joint injection.

For many years, I have been curious about the frequency with which peripheral vascular disease and osteoarthritis are seen in the same patient. A vasodilator, cyclandelate (Cyclospasmol[*]), was often given in office practice for the treatment of symptomatic peripheral vascular disease. Several patients called my attention to the fact that their Heberden's nodes seemed to be getting smaller and that their symptoms were im-

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[*] Product of Ives Laboratories, New York, New York

TABLE I
AMOUNT OF JOINT REDUCTION

Patient	Date	Finger Measured			
		Right Index	Right Middle	Left Index	Left Middle
		(patients with steady reduction) Measurements in Centimeters			
Case 1	7-26-65	5.3	5.7	5.3	5.5
	8-9-65	5.3	5.5	5.2	5.2
	8-20-65	5.2	5.4	5.0	5.1
	10-12-65	5.0	5.2	5.0	5.1
	Total Reduction	.3	.5	.3	.4
Case 2	7-7-65	5.5	5.6	5.5	5.6
	8-4-65	5.5	5.6	5.5	5.6
	9-1-65	5.5	5.5	5.35	5.5
	9-29-65	5.4	5.5	5.4	5.5
	Total Reduction	.1	.1	.1	.1
Case 3	8-9-65	5.4	5.4	5.2	4.6
	8-16-65	5.1	5.2	4.9	4.45
	9-20-65	5.1	5.2	4.9	4.45
	Total Reduction	.3	.2	.3	.15
Case 4	8-22-65	5.0	5.2	4.9	5.0
	9-6-65	4.8	5.1	4.7	4.7
	10-5-65	4.8	5.1	4.7	4.7
	Total Reduction	.2	.1	.2	.3
Case 5	11-16-64	5.6	5.8	5.5	5.5
	12-28-64	5.6	5.8	5.2	5.3
	2-6-65	5.5	5.7	5.1	5.2
	9-16-65	5.35	5.5	5.0	5.0
	11-1-65	5.2	5.5	4.9	5.0
	Total Reduction	.4	.3	.6	.5
Case 6	11-9-65	5.6	5.4	5.4	5.4
	12-3-65	5.5	5.2	5.1	5.1
	12-28-65	5.5	5.2	5.0	5.0
	Total Reduction	.1	.2	.4	.4
Case 7	6-28-65	5.4	5.3	5.0	5.05
	7-26-65	5.3	5.3	4.8	5.0
	11-15-65	5.3	5.3	4.8	5.0
	Total Reduction	.1	.0	.2	.05
Case 8	7-24-65	5.2	5.1	4.9	4.8
	8-2-65	5.1	4.9	4.7	4.6
	8-26-65	5.1	5.0	4.7	4.5
	8-30-65	5.0	4.9	4.7	4.6
	10-12-65	5.0	4.9	4.6	4.6
	Total Reduction	0.2	0.3	0.3	0.2
Case 9	12-2-64	5.6	6.0	4.9	5.3
	1-21-65	5.4	5.7	4.9	5.2
	7-1-65	5.4	5.7	4.8	5.2
	8-4-65	5.3	5.6	4.6	5.0
	9-7-65	5.3	5.6	4.8	5.1
	10-10-65	5.3	5.6	4.8	5.1
	Total Reduction	0.3	0.4	0.1	0.2
Case 10	3-2-65	5.6	5.5	5.1	5.1
	3-25-65	5.5	5.4	5.0	5.0
	5-15-65	5.5	5.2	5.0	4.85
	6-9-65	5.3	5.1	5.0	4.9
	7-2-65	5.3	5.2	5.0	4.85
	8-14-65	5.4	5.2	5.0	4.9
	9-7-65	5.2	5.1	4.8	4.8
	10-19-65	5.2	5.1	4.8	4.8
	Total Reduction	0.4	0.4	0.3	0.3
Case 11	7-23-64	6.2	6.3	*	6.6
	8-20-64	6.1	6.3		6.5
	11-10-64	6.0	6.2		6.6
	12-20-64	6.0	6.2		6.5
	2-1-65	6.0	6.2		6.5
	11-4-65	6.0	6.3		6.5
	Total Reduction	.2	0.0		0.1
Case 12	11-9-65	5.6	5.4	5.4	5.4
	12-3-65	5.5	5.2	5.1	5.1
	12-28-65	5.5	5.2	5.0	5.0
	2-18-66	5.5	5.2	5.0	5.0
	Total Reduction	0.1	0.2	0.4	0.4
Case 13	12-3-65	5.4	5.2	5.1	4.9
	2-2-66	5.2	5.0	4.9	4.8
	Total Reduction	0.2	0.2	0.2	0.1

*Finger Absent

proving. The most dramatic evidence of this was in an elderly diabetic woman who refused surgery for gangrene of her toes. She was given 1,600 mg of cyclandelate daily. Her foot healed, and the Heberden's nodes on her fingers receded and she could use her hands better than at any time in several years.

Cyclandelate is a direct-acting musculotropic vasodilator and spasmolytic agent. Pharmacologically the drug is similar to papaverine but is three to four times as effective as measured by blockade of experimentally induced muscle spasm.[13] Animal experiments suggest that the drug increases tissue perfusion as well as increasing blood flow.[13] Clinically cyclandelate has been shown to be effective in the management of peripheral vascular disease and also to be remarkably free of side effects.[15, 16] The drug has never been reported to be of value in the treatment of osteoarthritis. From observations in daily practice, it seemed that cyclandelate might be effective in treating Heberden's nodes, so a plan was devised to study a few osteoarthritic patients in a more detailed way.

Method

The 16 patients selected had large Heberden's nodes. A steel measuring tape was used to measure the index and middle fingers. This measurement was repeated at various intervals after the patients were given 800 mg of cyclandelate daily.

In two cases roentgenograms of the hands were made. It was not feasible to do angiograms before and after treatment. The primary interest was in objective and subjective improvement in mobility and appearance of the hands.

Results

Of the original 16 patients, two patients were not considered because of insufficient data available for evaluation. One patient discontinued the medication because of hyperemia of the hands and feet. The remaining 13 patients felt their symptoms of joint stiffness and swelling were improved. One patient commented that she would have been able to delay her retirement from a job requiring manual dexterity if she had been given this treatment sooner. This favorable subjective response was typical. Patients who were diabetic, with consequently more severe atherosclerosis, seemed to experience the best results.

The roentgenograms did not show any significant regression of bony changes, but one would not expect such permanent changes to disappear. It will be interesting to see whether or not the progression of bony changes is stopped by the treatment, so that the defects will not become more severe as they are inclined to without treatment.

Changes in joint size were evidenced in all the patients as shown in Table I. Of the 13, ten experienced a steady progressive decrease in joint circumference. Some fluctuation in size was observed in the remaining three patients.

The association of the improvement in the patients osteoarthritis and treatment with a vasodilator is too consistent to be fortuitous and strongly suggests a causal relationship. This previously unreported effect of cyclandelate should be confirmed in larger trials where it would also be of interest to combine hand arteriography in order to see if there is an actual change in the vascular pattern.

If these results are confirmed by others, they may cast light on the etiology of this form of osteoarthritis. The effect produced by pharmacologic vasodilators may be similar to environmental warmth and explain why the disease is rare in warm climates and why patients respond well to warmth applied to the hands. The results might also explain the tendency for Heberden's nodes to appear at the menopause when atherosclerosis first presents itself as a clinical problem in women. Other etiologic factors would have to be sought in order to explain the predominance of women over men and familial tendencies in the disease.

Summary

A history of research related to Heberden's osteoarthritis is reviewed. Personal experience in observing coincidental control of Heberden's nodes in patients being given cyclandelate for occlusive peripheral vascular disease is considered.

A group of 13 patients with Heberden's nodes were subsequently studied by administration of this vasodilator followed by measurements of the distal joints of the fingers. It would appear that the drug was a valuable adjunct to cosmetic and functional improvement in the treatment of this type of osteoarthritis, and that additional study of a possible vascular causation of hypertrophic osteoarthritis is indicated.

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Effect of cortisone on the structure of the teeth. C. Lanzavecchia et al (Via Garibaldi, 26, Novi Ligure, Italy) Minerva Pediat 19:13-16 (Jan 7) 1967.

Long-term follow-up examination was done in 43 children of both sexes who had been treated with cortisone. Only 1 of the 43 subjects examined had normal teeth, whereas the others showed more or less marked dental changes involving the dentin and the enamel. These changes probably resulted from prolonged treatment with large doses of cortisone.

POST-MYOCARDIAL INFARCTION SYNDROME

THREE CASE REPORTS

GEORGE W. DURST, JR., M. D.
ARTHUR V. WILLIAMS, M. D.
Charleston, S. C.

Introduction

A post-myocardial infarction syndrome was reported by Dressler[1] in 1956 and estimated by him to occur in 3% of all cases of myocardial infarction. Although this syndrome is now a recognized complication of infarction of the myocardium, it presents difficulties in diagnosis perplexing enough to justify the publication of three additional cases.

The differential diagnosis of chest pain is a notorious cause of clinical difficulty. Even after the establishment of the diagnosis of myocardial infarction, the differential diagnosis of subsequent pain in the chest may be complex. Involvement of the pericardium by the primary disease process with a bloody or serosanguinous pericardial effusion, pleuritic change from pulmonary embolization or pneumonia associated with congestive failure, or the discomfort of failure itself all make the diagnosis of post-infarction chest discomfort uncertain. The post-myocardial infarction syndrome is easily overlooked since it mimics these other complications of more alarming nature.

The following three cases illustrate the difficulties in diagnosis as well as the benignity of the process and its response to steroids.

Case 1. This 54 year old white male with a long history of hypertension and angina was admitted to Roper Hospital on 15 January 1966 following the abrupt onset of severe substernal pain spreading across the anterior chest wall and radiating down both arms to the elbows.

Physical examination revealed no unusual findings. Electrocardiogram demonstrated a diaphragmatic myocardial infarction.

Routine laboratory studies were normal. Leukocyte count was 10,345 with a normal differential. The serum transaminase rose to a maximum of 166 units on the second day.

Hospital Course

The patient continued to have severe precordial pain and the second hospital day developed a pericardial friction rub which persisted for five days. On the 12th day after admission a pericardial effusion was demonstrated by x-ray and this was proven to be sero-sanguinous by pericardial aspiration. Prednisone, 20 mg daily was begun with subsidence of chest pain within 24 hours. Hospitalization was prolonged because of persistent weakness and intermittent precordial discomfort apparently anginal in nature.

He was discharged on the fifth of March only to be readmitted two days later because of severe precordial pain.

Examination of the heart revealed no clinical enlargement. Sinus rhythm was present at rate 100. No friction rub was heard.

An electrocardiogram revealed an old posterior infarction and ST segment depression of anterior ischemia. X-ray film of the chest was normal. Highest SGOT value was 30 units. Steroid therapy was re-started, and maintenance Coumadin continued. The patient again became asymptomatic and was discharged on the 15th of March.

Department of Medicine, Medical College of South Carolina, Charleston, South Carolina.

Case 2. This 58 year old white male sustained an acute infero-lateral myocardial infarction on January 18, 1964. This was complicated by pericarditis and embolus to the left leg on the sixth hospital day, requiring attempted embolectomy. An embolus was not found but the foot survived.

The patient then developed congestive heart failure which responded to digitalis and diuretics. He subsequently had two hospital admissions for severe bilateral pleuritic type pain, fever, and bilateral pleural effusion. Because of these findings he was treated for pulmonary embolization and, on one occasion, received a trial of penicillin and streptomycin for possible subacute bacterial endocarditis.

Because of continued fever he was readmitted to the hospital on the 24th of April, 1964. Physical examination revealed the patient to be alert and cooperative and in moderate distress because of left pleural pain.

There were no unusual findings except for the absence of left posterior tibial and dorsalis pedis pulses.

Electrocardiogram demonstrated a posterolateral infarction unchanged from previous tracings. A chest film showed minimal blunting of the left costo-phrenic angle. A later film indicated patchy pneumonitis in the left costophrenic angle. All laboratory studies were normal.

Clinical Course

The patient continued to complain of pain of pleuritic type in both right and left chest areas and in the left shoulder. Temperature varied from 99° to 100.6° F. On the 29th of April he developed a pericardial friction rub and was started on prednisone, 30 mg daily. Within 24 hours he became asymptomatic and was discharged on May 6.

Recurrences of pain and subsidence with cortisone were noted in June and July of 1964. Similar recurrences were observed in March, June, and July of 1965. The patient was last seen on the 17th of March, 1966, and at that time was asymptomatic.

Case 3. This 51 year old white male was well except for known moderate hypertension until August 1, 1965, when he was awakened by moderately severe mid-anterior chest pain radiating to both elbows. The pain was accompanied by weakness, pallor, and sweating.

Physical examination revealed a well nourished and developed white male, alert, oriented, pale and critically ill, but with no unusual findings. Skin was cold and moist.

Admission laboratory studies were all normal. Electrocardiograms revealed a recent diaphragmatic infarction. Hospital course was complicated by persistent anterior chest pain. On the third of August a friction rub was heard and temperature rose to 103°. Chest film showed pulmonary congestion and probable pericardial effusion. Anticoagulants started at the time of admission were discontinued. Chest pain and an intermittent friction rub continued through the 26th of August. By the ninth of September he was relatively asymptomatic and was discharged.

Following discharge, the patient developed precordial pain and a pericardial friction rub. Twenty mg prednisone daily caused symptoms to subside. However, with steroid withdrawal pain recurred. Prednisone was successfully withdrawn in March 1966.

Discussion

Three cases of post-myocardial infarction syndrome are presented. Clinical findings simulated pulmonary embolism and the usual pericarditis of myocardial infarction.

Differentiation of such pericarditis cannot always be made early in the clinical course of myocardial infarction. Persistence of a friction rub is suggestive of post-infarction syndrome, the rub of pericarditis with myocardial infarction being characteristically of brief duration. The appearance of a pericardial friction rub late in the course of myocardial infarction should also arouse suspicion of the presence of the syndrome.

Differentiation from pulmonary embolism is also a matter of timing as well as lack of specific laboratory and x-ray confirmation of embolism and pulmonary infarction. Occurrence of pleural pain following the first three weeks of infarction is suggestive and its onset beyond six weeks is almost diagnostic.

Pneumonitis following myocardial infarction has been described as part of this syndrome. [2, 3] However, this is most often associated with advanced heart disease with evidence of circulatory failure, a poor prognosis and unsatisfactory response to steroids. In all likelihood, this is unrelated.[4]

Chest pain due to extension of myocardial infarction may also be difficult to differentiate and requires, primarily, an awareness of the possible presence of the post-infarction syndrome.

Fever was a prominent part of the clinical picture of Case 2 and was present in Cases 1 and 3, but was always associated with other signs and symptoms and, *per se*, did not present a diagnostic problem.

It has been suggested by Epstein[5] that the syndrome is due to tissue sensitivity to antibodies produced as a reaction to necrosed myocardium. Such antibodies to cardiac muscle have recently been demonstrated in one case of post-myocardial infarction syndrome.[6]

The clinical response of the reported cases and others in the literature following the administration of steroids is further evidence that the syndrome has an allergic basis.

Summary

Three cases of post-myocardial infarction syndrome are presented. The differential diagnosis is discussed.

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Preventing pressure sores in hospital—M. R. Bliss, R. McLaren, and A. N. Exton-Smith (Univ College Hosp, London) Brit Med J 1:394-397 (Feb 18) 1967.

In a controlled trial 42 geriatric patients (with a mean age of 80 years) were nursed on a new type of alternating pressure mattress called the large-celled ripple bed. The patients, owing to their poor general condition as assessed by a scoring system, were considered liable to develop pressure sores. The results were compared with a similar group of 41 patients who were nursed on ordinary hospital mattresses. The large-celled ripple mattress proved highly effective, not only in preventing pressure sores, but also in promoting healing in those patients who entered the trial with sores. The cells of the large-celled mattress are 6 inches wide, giving it a depth of 4 inches when inflated. Inflation to deflation of alternate cells lasts about four to five minutes.

CONGENITAL ABSENCE OF THE GALL BLADDER

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Laurens, S. C.

Complaints suggestive of biliary tract disease are common in the general practice of medicine. The persistence of these complaints usually results in x-ray studies of the upper gastrointestinal tract and gallbladder. The attending physician is generally pleased with his original impression when x-ray films are reported as showing cholelithiasis or non-functioning gallbladder. By and large these patients can be benefited by a cholecystectomy. It is disconcerting, therefore, to have such a patient properly prepared for surgery and then at surgery find that she has a congenital absence of the gallbladder and no other finding to explain her symptoms. Explanation to the patient and her family can present some problem, particularly when time has been spent preoperatively explaining that the radiological diagnosis of a non-functioning gallbladder does not indicate the absence of that organ. Supporting help from another physician and from the medical literature regarding the rarity of congenital absence of the gallbladder can be comforting, particularly to the surgeon. As we have had a recent experience with this matter, we present the following case history and a brief review of the recent literature.[1-8]

A 45 year old, white, married female was admitted to the Laurens District Hospital for evaluation of recurrent upper abdominal discomfort associated with some nausea and vomiting. She had intolerance to foods such as onions, cabbage, and cucumbers. She had never had any definite jaundice, but stated that with one of her spells the urine became dark. Her general health was satisfactory. She had had an abdominal hysterectomy and appendectomy.

The general physical examination was normal. Laboratory studies were not remarkable. ECG was normal. The chest film and upper gastrointestinal x-ray studies were normal. Gallbladder x-ray films on 2 occasions were reported as showing a non-functioning gallbladder.

Because of the clinical, laboratory and x-ray findings, the attending physician and surgeon felt that the patient was suffering from cholecystitis and cholelithiasis and that surgery was indicated. Surgery was performed and she was found to have congenital absence of the gallbladder. There was no evidence of a cystic duct. The common duct was explored and no evidence of abnormality was found. An operative cholangiogram did not reveal any abnormality. The liver and pancreas were normal and no cause for her complaints was found. The common duct was not drained. A cigarette drain was inserted and post-operatively she drained a fairly large amount of bile colored fluid. This gradually subsided over 5 to 6 days. Her post-operative course was generally satisfactory. Since discharge she has done well and has had minimal digestive complaints.

Congenital absence of the gallbladder is rare. About 150 cases found at surgery or autopsy have been reported. The first recorded case report was by Lemery in 1701. The incidence in autopsy series varies from 0.03 to 0.09 per cent. Common duct stones have been found in 25 to 50 per cent of reported cases. Richards[7] has reported a case associated with primary carcinoma of the common bile duct. Evidence of cirrhosis and pancreatitis have been reported in some cases.

The symptoms in patients with absence of the gallbladder are quite varied and range from those of acute and chronic cholecystitis and common duct stone. It has been suggested that symptoms may be due to improper function of the sphincter of Oddi. In 25 to 50 per cent of patients symptoms may be explained by the finding of calculi in a dilated common duct. If stones are not found, the cause of symptoms is usually obscure.

When a surgeon faces this problem at the operating table, he should make a careful dissection to be certain that an atrophic gallbladder, one covered by dense adhesions, or one in an atypical position is not missed. An operative cholangiogram should be performed and facilities for performing this should always be available to the surgeon operating upon the biliary tree. If pathologic change in the common duct is present, appropriate treatment should be carried out. If the common duct is normal to inspection and palpation and a cholangiogram is normal with a good flow of dye into the duodenum, T-tube drainage would probably not be necessary, although some surgeons advocate this. Proper therapy for any abnormality should be done. If no abnormality is found, the abdomen should be closed. The surgeon should then allow the family physician to explain the situation to the anxious family. He can stress the fact that using the diagnostic facilities now available there is no way to rule out this abnormality before surgery. He can also point out that while the condition of congenital absence of the gallbladder is not unknown, it would ordinarily be ruled out by reason of its rarity.

One case does not allow us to reach any profound conclusions. Our one patient has been reasonably happy knowing that she is indeed a rare individual in at least one respect.

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Trichinosis: Report of a small outbreak with observations of thiabendazole therapy—W. J. Hall and W. R. McCabe. Arch Intern Med 119:65-68 (Jan) 1967.

A circumscribed outbreak of trichinosis originating from a single food source was observed. Overt clinical infection, accompanied by eosinophilia and reactive *Trichinella* antigen skin test occurred in four or five persons who ingested raw pork, while no apparent infections occurred in more than 100 individuals who ate the pork after proper cooking. Thiabendazone therapy was employed in three of the four patients with recognizable trichinosis. Clinical improvement was noted in all three patients. Assessment of unequivocal benefit from therapy with thiabendazone was not possible because of the limited number of observations.

CRYOSURGERY FOR PARKINSONISM

AND OTHER ABNORMAL MOVEMENT DISORDERS

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Effective operations for the palliation of the tremor and rigidity of Parkinson's disease were developed prior to World War II.[3] Lesions were made by cutting fiber tracts of the basal ganglia. Although some excellent results were obtained, operative mortality approached 14 percent. After World War II, ultrasound was used to make the lesions.[4] This technique was safer but extremely cumbersome. In 1961, Cooper[1] began making thalamic lesions with a cryosurgical technique. This technique has reduced the mortality to one percent and the morbidity, such as hemiparesis, to one percent also.[2]

The present cryothalamotomy consists of destroying an area one cm in diameter in the nucleus ventralis lateralis of the thalamus. The procedure is performed under local anesthesia with the patient awake. The following are case reports of our two most recent cryosurgical procedures prior to the writing of this report.

Case I. S. A. is a 39 year old Negro laborer who first noted the onset of rigidity in his right lower extremity in 1960. The condition progressed, and, by 1963, he also began to have a tremor in his right lower extremity. This was followed by rigidity in his right upper extremity. In 1964, his left extremities also began to be involved with tremor and rigidity.

When hospitalized in October, 1966, he had signs of advanced Parkinson's disease. The facies was masked, the voice monotone, and he was unable to ambulate or to feed or dress himself. There was masked, the voice monotone, and he was unable to rigidity in his left extremities. A mild non-intention tremor was present on the right. After hospitalization, he had two weeks of physical therapy with active and passive motion of his extremities. His medications, Artane (trihexyphenidyl) and Pagitane (cycrimine), were discontinued preoperatively so that the effect of his operative procedure could be evaluated more accurately.

On November 11, 1966, a left cryothalamotomy was performed. A single lesion was made in his left nucleus ventralis lateralis by cooling the probe to minus 75 degrees centigrade for seven minutes (Fig. 1). He had immediate, complete relief of tremor and rigidity in his right extremities. Postoperatively, the anti-Parkinson medications were resumed for the symptoms on the left side, which were unaffected by the operation. Also he was given further physical therapy prior to discharge. When discharged one month later, his right side remained free of tremor and rigidity, and he was able to ambulate and to feed and dress himself.

Case II. H. P. is a 42 year old, right-handed, white male truck driver. In 1958 he noted quivering of the right side of his mouth. In 1959 he had weakness and difficulty controlling his left extremities. By 1961 he was having abnormal movements of the left upper extremity and left side of his face. Both were accentuated during stress. In 1965, seven years after his first symptom, the condition had progressed until his left foot was drawn inward into an extended and inverted position so that he required a brace to walk. The abnormal movements of the left extremities became so severe that he was totally disabled. When hospitalized in November, 1966, he had severe torsion spasms of the left side of his body, as well as abnormal movements of the left extremities. Due to severe grimacing and involuntary movements of his mouth, attempts to speak produced only unintelligible sounds. He also had moderate to severe torticollis. All symptoms were accentuated by emotional stress.

On December 1, 1966, a right cryothalamotomy was performed. Two lesions were made in the nucleus ventralis lateralis of the thalamus. One lesion was 12 mm lateral to the midline and midpoint be-

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Development of cryosurgical techniques at the Medical College Hospital has been supported by the Saul Alexander Foundation.

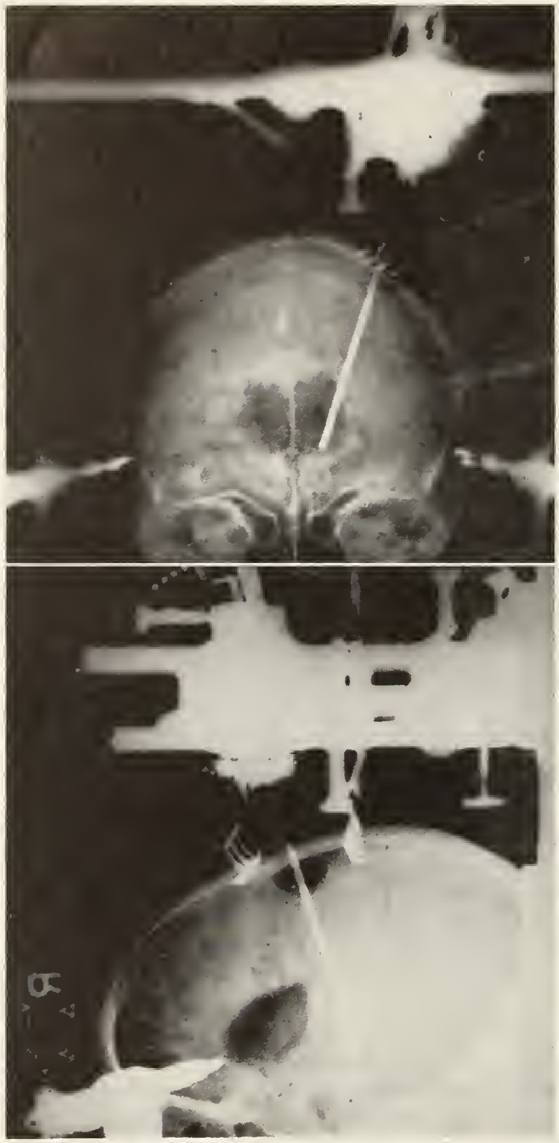

Figure 1: Films of Case I which demonstrates the position of the probe when the cryogenic lesion was made.

tween the foramen of Monro and the pineal gland. The second lesion was made 2 mm posterior and 2 mm lateral to the first one. Immediately postoperatively, his condition was dramatically improved. One month later, abnormal movements and tonic spasms of his left side were completely absent. Speech and ambulation were greatly improved. During emotional stress, he still had a slight element of torticollis. The previously disabled left extremities were useful again.

Discussion of Operative Procedure

A pneumoencephalogram is performed with the patient in the sitting position. With the patient remaining awake, he is moved to the supine position and placed in a special head holder. Local anesthesia is produced in the scalp, and a trephine is made along the coronal suture, approximately 4 cm lateral to the midline. The target area of the brain is calculated from AP and lateral skull films. The usual target area is 17 mm posterior to the foramen of Monro and 13 mm lateral to the midline. The probe is placed over the trephine and the x-ray films repeated. Adjustments are made until the probe is directed exactly toward the target area. The probe is advanced to the proper depth and cooled to zero degrees centigrade. This temperature produces paralysis but not necrosis of the neurons. The patient's speech, motor power and other neurological functions are tested. If the desired effects are obtained, and there is no evidence of a neurologic deficit, the lesion is made permanent by reducing the temperature to minus 75 degrees centigrade for seven minutes. This produces a .8 to 1.0 cm lesion.

The main advantage of cryosurgical technique in the treatment of abnormal movement disorders is the reversibility of the lesion in the early testing stage. This reversibility is possible because the initial temperature, zero degrees centigrade, used for the testing is cold enough to cause physiologic dysfunction, but not cold enough to cause permanent anatomic change.

Treatment

The medical or operative treatment for the abnormal movement disorders is complex and demanding of the physician. Either medical or operative treatment should be combined with a vigorous program of physical therapy. Before beginning treatment, the patient should first be evaluated regarding his general health, age, occupation and his degree of disability. A definite goal should be established. The goal may be to control symptoms and to return the patient to work, or it may be to allow a totally disabled patient to be more self-sufficient in dressing and feeding himself.

Medical therapy with drugs should be tried in every case. Only after failure of medical therapy should operative treatment be considered. The indications for operation for abnormal movement disorders must be quite rigid to prevent disappointment for the patient and his family. The tremor and rigidity of Parkinson's disease can be effectively relieved. Other manifestations, such as masked facies, are largely unaffected. Thus, the appearance of the patient may be little changed, yet he may have a quite satisfactory change in function.

In addition to relieving the tremor and rigidity of Parkinson's disease, cryothalamotomy has been effective in many other movement disorders. Cryothalamotomy has proven to be life-saving in cases of hemiballism. Hereditary intention tremors have often been treated very successfully. The tremors caused by multiple sclerosis can sometimes be treated successfully. Patients with dystonia musculorum deformans may be improved by decreasing their muscle tone. Patients with torticollis usually require bilateral thalamic lesions before satisfactory relief is obtained.

A thalamotomy may be performed bilaterally with relief of tremor and rigidity on both sides. However, there is increased risk with bilateral lesions, particularly with regard to production of mental changes. A four to six month interval should elapse before a thalamotomy is done on the side opposite to the first operation. This allows a complete recovery from the first operation and decreases the chances of complications. Also, occasionally the patient may be rehabilitated by the unilateral procedure to the extent that the second one is unwarranted despite the persistence of symptoms on one side.

Summary

Cryothalamotomy is an effective and proper treatment of Parkinson's disease and other abnormal movement disorders. In this article, two cases are reported, and the indications for operation are given. It is stressed that a definite goal should be sought which would produce a significant improvement in the patient's productivity or his ability to care for himself. If proper indications for operation are present, and if the expected results are thoroughly understood by the patient and his family, the result of the operation is gratifying.

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CRYOTHERAPY IN OTORHINOLARYNGOLOGY

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Cryotherapy refers to that branch of therapy which relates to the application of ultracold to a part for the purpose of destroying the offending tissue. The word is derived from the Greek word "kryos" meaning cold. It is interesting to note that before the development of modern instruments to produce subfreezing temperatures locally in a specific area some attempts were made to reduce temperatures both intracranially and externally. The first recorded attempt to use cold therapeutically was when Arnott[1] in 1851 attempted to inhibit the growth of a carcinoma by the application of an iced brine solution to the tumor. Later, in 1883, Openchowski[2] described the results obtained by freezing certain areas on the cortex of the brain of a dog. In the past two decades, using modern instruments, we have added a great deal to our store of knowledge on the biologic changes that occur when ultracold is applied to living tissue. Fay,[3] Hass and Taylor,[4] Meryman[5] and others have been among the pioneers in this field. The application of these concepts clinically began in 1960 when Krawicz,[6] using Freon as the refrigerant, devised an instrument for the cryo-extraction of cataracts. In 1962 Cooper,[7] using liquid nitrogen as the refrigerant and a stainless steel probe 2 mm in diameter, insulated except for the tip, was able to produce necrosis deep in the thalamus of individuals with abnormal movement disorders. By this means he was able to eliminate the abnormal movements in Parkinsonism and other related neurological disorders. Hill[8] in 1965, using Freon as the refrigerant, designed an instrument for office use with which he produces necrosis of tonsil tissue in adults under local anesthesia.

The author, using the instrument designed by Cooper* and a stainless steel probe 4 mm in diameter, has had good results on two cases of angiofibromas of the nasopharynx, one case of glomus jugulare, and as a palliative measure in a stomal recurrence of a carcinoma of the larynx and a recurrent juvenile ossifying fibroma of the maxillary sinus and adjacent structures.

Other authors,[9-10] using a similar instrument, have used cryotherapy to destroy selectively the vestibular apparatus while preserving the cochlea in intractible Meniere's disease and to treat carcinomas of the lip and intraoral areas.

Brief case reports of the author's experience follow.

Case 1. R.F., an 18-year-old white male, was admitted to the Medical College Hospital (S. C.) on August 1, 1965, with a diagnosis of angiofibroma of the nasopharynx. The diagnosis had been made by the referring physician. On August 3, 1965, an attempt was made to remove the tumor, using the ophthalmic cryosurgical unit with Freon as the refrigerant. This was not successful because the temperature could not be reduced below minus 15° centigrade. A transpalatal approach was made, using a horseshoe-shaped incision with the open ends of the horseshoe pointing posteriorly. The mucoperiosteal flap was reflected posteriorly and the posterior one-third of the hard palate on the right was removed with a Kerrison rongeur. The flap was reflected back into place and loosely sutured with interrupted 0000 Dermalon sutures. Estimated blood loss was about 400 ml, and this was replaced with one unit of whole blood.

On August 3, 1965, the tumor was removed with the cryosurgical unit described. It was found that the tumor had eroded the floor of the right sphenoid sinus, and the posterior portion of the nasal septum. Three 4 x 8 packs of Surgicel were inserted into the area occupied by the tumor. The estimated blood loss was 500 ml, and this was replaced with one unit of whole blood.

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* CE-2 Cryosurgery Equipment, Linde Company, Division of Union Carbide Corporation, 270 Park Avenue, New York 10017.

The patient made an uneventful recovery and was discharged eight days later. The Surgicel packs were removed in the office a week after discharge from the hospital. There was no blood loss. There has been no evidence of recurrence a year after surgery.

Case 2. L.H., a 13-year-old white male, was admitted to the Medical College Hospital on October 9, 1965, with a diagnosis of angiofibroma of the nasopharynx confirmed by previous biopsy. He gave a history of repeated nose-bleeds which began with a sudden episode in June of 1964. These nose-bleeds had resulted in a secondary anemia which had been controlled by treatment with iron.

Physical examination revealed a thin, frail, sallow-complexioned white male with an anterior nasal pack in place in the left nostril to control bleeding from the biopsy site of the tumor. The remainder of the examination was within normal limits.

On October 14, 1965, under endotracheal anesthesia, an operative procedure similar to that used in the first case was carried out and a large tumor, 3 x 4 cm, attached to the lower surface of the left sphenoid sinus, was removed after freezing with the probe, using liquid nitrogen as the refrigerant. The area was packed with Surgicel attached to the cheek with silk ties. Estimated blood loss was 500 ml, which was replaced with one unit of whole blood. The pathological diagnosis was juvenile angiofibroma of the nasopharynx.

The patient made an uneventful recovery and was discharged on October 19, 1965, after the packs had been removed on October 18, 1965. There has been no evidence of recurrence a year after surgery.

Case 3. M.G., a 43-year-old white female, was admitted to the Medical College Hospital on August 9, 1965, for the removal of a recurrent glomus jugulare tumor involving the left ear. She had first been seen by me on March 21, 1960.

Her symptoms had started with tinnitus and a feeling of fullness involving the left ear in 1956 and had progressed to left facial weakness, paralysis of the left vocal cord, atrophy of the left side of the tongue, decreased gag reflex on the left, and inability to raise her left arm above her head.

A left radical mastoidectomy was done on March 28, 1960, and as much of the tumor was removed as possible. There was considerable blood loss and this was replaced with two units of whole blood. Following this she had considerable improvement in the functioning of all of the cranial nerves except the XIIth. Because of recurrence of the tumor, which could be visualized on routine otoscopic examination, revision of this procedure was done on September 17, 1963. A large mass of tumor tissue in the middle ear was removed but not completely.

In August of 1965, she was again noted to have an increase in the size of the tumor on routine otoscopic examination. She was admitted to the Medical College Hospital on August 9, 1965, and surgery was performed on her left ear on the following day. At operation a regrowth of the tumor, approximately 5 mm in diameter, was found occupying the hypotympanum. A postauricular approach was used, the mastoid tip was removed, and the facial nerve was identified and uncovered throughout most of the vertical portion. This was done in order to have it visible during the use of cryosurgery and as a prophylactic decompression of the nerve. The facial nerve was stimulated both before and after cryosurgery with the electric nerve stimulator and responded well on each occasion. A Zeiss operating microscope was used during this procedure to visualize the tumor more adequately. After removal of the tumor, the jugular bulb was seen to bulge up into the hypotympanum. The estimated blood loss was 40-50 ml and no replacement was given.

The patient developed paralysis of the left facial nerve immediately after surgery, but showed some spontaneous improvement by the time of discharge, eight days later. The nerve continued to improve slowly and after six months there was almost complete recovery of function. No evidence of regrowth of the tumor has been noted a year after surgery.

Case 4. L.J., a 67-year-old white male, was admitted to the Medical College Hospital on November 6, 1966, with a diagnosis of recurrence of laryngeal cancer on the left side of the tracheal stoma. He had previously had a laryngectomy and a left radical neck dissection on September 9, 1961.

On November 7, 1966, after reflecting a U-shaped skin flap hinged medially, the lesion was frozen in multiple sites. The flap was sutured, using interrupted Dermalon and the wound was completely healed in two weeks. The tumor has decreased in size. Not enough time has elapsed to determine the final result, but this treatment at present is considered to be only palliative.

Case 5. S.J., a 14-year-old colored female, was admitted to the Medical College Hospital on November 21, 1966, with a diagnosis of recurrent juvenile ossifying fibroma of the left maxillary sinus. She developed headaches and an angiogram of the left internal carotid showed an intracranial extension. X-ray therapy was considered, but was not carried out because of the possibility of converting this tumor to a fibrosarcoma. We decided to try cryosurgery as a palliative procedure. On December 8, 1966, under general anesthesia, a U-shaped incision was made in the mucous membrane of the hard palate with the open ends of the U posterior. The free border of the hard palate was exposed and about one half of it was removed exposing the anterior margin of the tumor. Three sites were used and the probe was inserted to a deep, medium, and shallow level in each of the sites. The temperature was reduced to −180° C. for five minutes at each of the sites selected. Then using a Caldwell-Luc approach on the left, the probe was inserted in three sites on this surface and the temperature was reduced to −180° C. for five minutes at each site. The wounds were closed with interrupted sutures of 0000 chromic catgut. The patient made an uneventful recovery and was discharged on December 17, 1966.

She returned on January 6, 1967, and the wounds were well healed. The deformity of her left cheek with proptosis of the left eye was about the same, but her headaches were less. Again the treatment in this case is considered to be palliative only, the tumor being malignant by position.

Comment

Cryosurgery, using the modern instruments at our disposal, gives promise of becoming an effective method of treating benign and malignant lesions both curatively and palliatively in a variety of sites in the body. It is particularly useful in treating otolaryngic lesions where blood loss is so frequently a problem.

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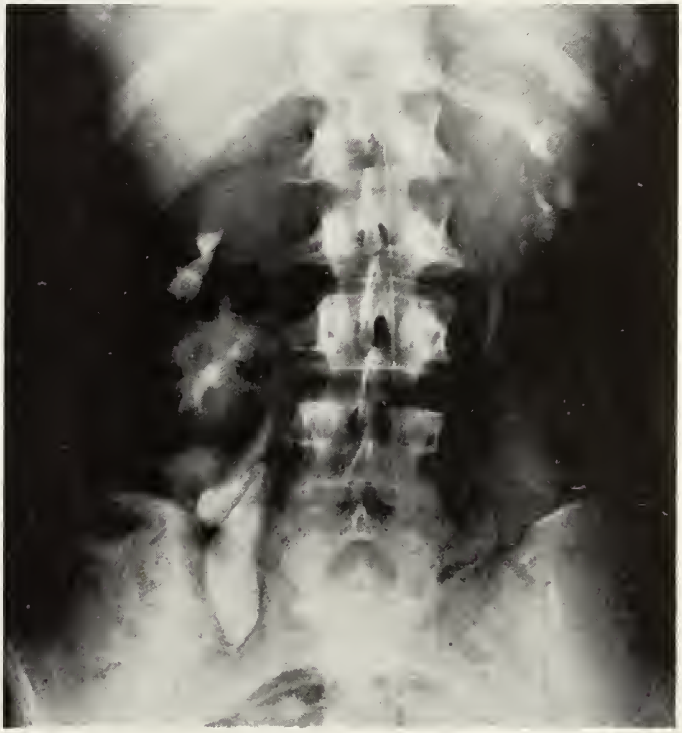
The volunteer in blood banking, by E. A. Dreskin, M. D. (Greenville), Transfusions, 6:425, Sept.-Oct., 1966.

In my role as President of the American Association of Blood Banks, I have been impressed by the quality of volunteer services provided to the Association by pathologists, scientists, and technologists. It is pointed out that the Inspection and Accreditation Program of the Association is conducted by volunteer pathologists serving without compensation. The Board and Committee chairmen all serve as volunteers. This is contrasted with the usual concept of volunteer worker in the hospital or in agency work where simple clerical tasks or receptionist duties are assigned. As a summary of the volunteer functions within the American Association of Blood Banks, a listing of the various activities of the Association which are carried out by volunteers is given.

E. A. D.

X-RAY FILM OF THE MONTH

FLETCHER C. DERRICK, JR., M. D.
S. E. PUCKETTE, JR., M. D.
Medical College Hospital



This 10-minute IVP film was taken on a 27 year old white female who has had recurrent urinary tract infection with each of four pregnancies. The symptoms had always been predominantly on the right side. Review of a IVP done four years previously demonstrated similar findings to those in the above film, that is, a slight fullness to the calyces and pelvis on the right and a much more noticeable dilated upper right ureter. The dilation of the ureter ended abruptly at the level of S-I.

This is a case of the right ovarian vein syndrome. In the 1964 edition of Emmett's *Clinical Urography,*[1] J. Craig Clark, M. D. gives a previously unpublished account of what he terms "the right ovarian vein syndrome".[1] This he defines as an aberrant ovarian vein causing right ureteral obstruction, generally at the level of S-I or approximately 14 cm from the ureterovesical junction. He feels that this vein enlarges during pregnancy, causing compression of the right ureter with resulting obstruction. Symptoms are then related to either over-distention of the upper urinary tract or superimposed infection. Following pregnancy, because of incomplete involution of the enlarged vein, chronic changes may persist.

Symptoms may begin as early as the third or as late as the eighth month of pregnancy. The majority however occur in either the fourth or fifth. The symptoms depend on whether the kidneys are infected or not. If infection is present, symptoms characteristic of acute pyelonephritis are manifested such as pain in the right side, chills, fever, and pyuria. If there is no infection, complaints consist of severe back ache, tenderness in the costovertebral angle, and in the right lower quadrant and perhaps extension of the pain down the anterior medial aspect of the thigh to the knee. Where the pain is severe, some relief may be obtained by lying on the left side or prone. Radiologically, the IVP findings are as noted above. Retrograde ureteropyelograms should be made in suspected cases according to the technique described by Dr. Clark. This right ovarian vein syndrome may well be the answer as to why 95% of the cases of pyelonephritis of pregnancy occur on the right side and almost 100% of the cases of hydronephrosis and hydroureter of pregnancy occur on the right side.

REFERENCE

1. Clark, J. C.: Clinical Urography ed. 2, p. 1227. W. B. Saunders Co., Phila. 1964.

Glucose tolerance tests in pregnancy and clinical manifestations in the offspring—M. S. A. Velasco, F. Benjamin, and H. H. Gordon. Amer J Obstet Gynec 96:930-937 (Dec 1) 1966.

A group of 51 pregnant women were selected for study of glucose tolerance because of one or more of the following criteria in their history; diabetes in the family; one or more infants weighing nine pounds or more at birth; unexplained stillbirths or neonatal deaths, fetal abnormality, toxemia, hydramnios, or abnormal glucose tolerance in previous pregnancies; glycosuria, estimated hydramnios, or excessive fetal size for gestational age, or maternal weight of 160 pounds or more, in the current pregnancy. Standardized oral and "rapid" intravenous glucose tolerance tests were carried out within seven days of each other in each patient in the third trimester of pregnancy. For purposes of analyzing oral glucose tolerance curves, four groupings were made: "overt diabetes" (9 patients); "gestational diabetes" (18 patients); "suspect controls" (21 S-control patients); "normal controls" (10 N-control patients). A total of 58-liveborn infants were included; nine were born to mothers with insulin-dependent diabetes, 18 to mothers with gestational diabetes, 21 to suspect controls, and 10 to normal controls. There were two stillbirths and two neonatal deaths in the infants of the overtly diabetic mothers. Abnormal glucose tolerance was shown in 18 of the 39 mothers; twelve of these mothers had infants above the 75th percentile of weight. Ten of the 18 infants showed plethoric, balloon-cheeked facies; eight of 9 infants born to overtly diabetic mothers had tachypnea; five of 9 infants born to overtly diabetic mothers had jitteriness.

Ex-President's Page

There are a number of programs that I hope will be continued in the years to come. The Council and the President vary from year to year but there are trends some more worthwhile than others.

First: interest in politics among doctors has reached a new high in South Carolina. Doctors are taking more and more interest in local, state and national laws and this is the best thing that could happen. We must learn to support financially and vocally our friends in politics and raise money to defeat the people who introduce laws inimical to our interest.

Second: the inroads of the federal bureaus to insure what they refer to as "good medicine for all the people" will continue. Since these programs come from different departments of the government, it is essential that the South Carolina Medical Association keep alert and informed of all the varied and new programs. So far we are fairly well informed on Medicare and Medicaid, the former under Social Security, the latter under the Department of Social Welfare. The regional program for Heart Disease, Cancer, and Stroke is under the National Institute of Health. The Appalachia Program applies to only six counties in South Carolina and a total of some thirteen million dollars is available for these counties. One of the most far reaching programs is under the Office of Economic Opportunity and allows funds for comprehensive health services regardless of economic standing in the community. Our chief health officer, Dr. Aycock, is well aware of this program. One of my last official acts was to appoint a committee whose duty will be to inform themselves of new health laws and interpret them for our members. Whether we like the trend of medicine or not laws are being passed and it would be folly not to know as much about them as possible.

Third: the Medical Association has taken an active interest in helping in the passage of traffic safety laws. The South Carolina Safety Council and the Safety Division of the South Carolina Highway Department have sought our help in contacting certain senators. Our help was freely given but often fruitless. The important point is that doctors are taking a positive attitude toward good legislation.

These trends are in the right direction. I hope in the future they will be improved. Doctors must somehow learn to spend more time in fields other than the practice of medicine. This is not our choice but is being forced upon us.

George Dean Johnson, M. D.

President's Page

Medicine is the most magnificent profession in the world (considering the ministry an avocation as contrasted to a profession). But it has been so denounced, especially by those politicians and sociologists and others determined to have socialized medicine, that the esteem in which it has been held has lessened. I think this scares many potentially excellent physicians away from the profession.

Nearly everyone seems to feel free, almost even called upon, to denounce physicians. No doubt we deserve some of it: no profession is perfect. But it seems a little overdone.

There is within our profession a tendency for us to criticize each other publicly almost amounting to fratricide. I hope that we of the South Carolina Medical Association will continue to feel free to disagree but that we might do it, if at all possible, within the framework of the Association—through the mediation committee, the county medical societies, and the house of delegates. It is true our ideas might not prevail, but "The genius of the democratic system rests on the ability of opposite extremes to modulate each other." (John G. Freeman, M. D. in *New England Journal of Medicine.*) So many brickbats are hurled at us from without, and usually without just cause, it might be better for us to throw ours within the framework of the Association.

Some of us may feel such an attitude would intolerably restrict us about some matter we feel is urgent. In such a case I would not want to restrict anyone's freedom of speech. Two alternatives at least would be left. We might exercise admirable restraint and bide our time for future action or we might resort to public denouncements. In the latter case ordinary courtesy and avoidance of slander would be quite in order.

Ours is indeed the world's most magnificent profession. It is not perfect and never will be so long as you and I are members of it. The day we became physicians a mantle of respect and admiration was cast upon us. Let us give much thought to trying to deserve this mantle and to even try to make it greater for those who follow us.

I wish for each of you a quiet, peaceful, fortunate, happy year.

Norman O. Eaddy, M. D.

in chronic illness

B and C vitamins are part of therapy: An imbalance of water-soluble vitamins and chronic illness often go hand in hand. STRESSCAPS capsules, containing therapeutic quantities of vitamins B and C, are formulated to meet the increased metabolic demands of patients with physiologic stress. In chronic illness, as with many stress conditions, STRESSCAPS vitamins are therapy.

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Each capsule contains:

Vitamin B_1 (as Thiamine Mononitrate)	10 mg
Vitamin B_2 (Riboflavin)	10 mg
Vitamin B_6 (Pyridoxine HCl)	2 mg
Vitamin B_{12} Crystalline	4 mcgm
Vitamin C (Ascorbic Acid)	300 mg
Niacinamide	100 mg
Calcium Pantothenate	20 mg

Recommended intake: Adults, 1 capsule daily, for the treatment of vitamin deficiencies. Supplied in decorative "reminder" jars of 30 and 100; bottles of 500.

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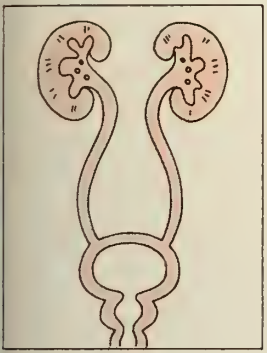
When the battle with bacteria is in the G. U. trac

Artist's conception of acute infection
showing G.U. pathogens with predominance of *E. coli*.

consider Gantanol (sulfamethoxazole)



For vigorous treatment of G.U. infections before the invaders become entrenched... Gantanol (sulfamethoxazole) offers a comprehensive spectrum of antibacterial effectiveness against most common gram-negative as well as gram-positive invaders. In addition, it provides satisfactory concentrations in the blood and urine with ready diffusion into interstitial fluids for antibacterial activity at foci of bacterial invasion.

High antibacterial activity against *E. coli* and other common urinary pathogens... A review of 153 cases of acute G.U. infections reported in the literature shows that 90% responded to Gantanol (sulfamethoxazole), with over one-half of these patients showing excellent relief of symptoms.[1,2] Even in stubborn chronic G.U. infections, almost 60% of 450 patients improved on Gantanol (sulfamethoxazole), including many who had not responded to other antibacterials.[1-6]

Generally uncomplicated therapy enhances the favorable clinical results... Of the total 686 patients from the studies cited,[1-6] only three discontinued therapy because of side effects. Most of the side effects reported (approximately 3%) were mild and included nausea and/or vomiting, skin rash, dizziness, headache, gastritis, generalized uneasiness and itching.[1-6]

1. Peters, J. H.: *J. Urol.*, *87*:747, 1962. 2. Draper, J. W., *et al.*: *South. M. J.*, *57*:920, 1964. 3. Stewart, B. L.: *J. Urol.*, *87*:491, 1962. 4. Hagstrom, R. S.: *Rocky Mountain M. J.*, *59*:(2), 37, 1962. 5. Arnold, J. H.: *Clin. Med.*, *71*:552, 1964. 6. Nelson, C. G.: *Colorado GP*, *3*:(3), 2, 1961.

Before prescribing, please consult complete product information, a summary of which follows:

Contraindicated in sulfonamide-sensitive patients, pregnant females at term, premature infants, or newborn infants during first three months of life.

Warnings: Use only after critical appraisal in patients with liver damage, renal damage, urinary obstruction or blood dyscrasias. If toxic or hypersensitivity reactions or blood dyscrasias occur, discontinue therapy. In intermittent or prolonged therapy, blood counts and liver and kidney function tests should be performed.

Precautions: Observe usual sulfonamide therapy precautions, including maintenance of an adequate fluid intake. Use with caution in patients with histories of allergies and/or asthma. Patients with impaired renal function should be followed closely since renal impairment may cause excessive drug accumulation. Occasional failures may occur due to resistant microorganisms. Not effective in virus or rickettsial infections.

Adverse Reactions: Headache, nausea, vomiting, urticaria, diarrhea, hepatitis, pancreatitis, blood dyscrasias, neuropathy, drug fever, skin rash, Stevens-Johnson syndrome, injection of the conjunctiva and sclera, petechiae, purpura, hematuria or crystalluria may occur, in which case the dosage should be decreased or the drug withdrawn.

Dosage: Adults—4 tablets initially, then 2 tablets b.i.d. or t.i.d. depending upon severity of infection. Children—1 tablet/20 lbs initially, followed by ½ tablet/20 lbs b.i.d.

How Supplied: Tablets, 0.5 Gm, bottles of 50.

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Destroys Trichomonads Wherever They Are

Flagyl seeks out the sites where trichomonads hide. Only a systemic agent can. Flagyl does, selectively and effectively.

Flagyl destroys trichomonads in the inner crypts, glands and cavities of the genitourinary tract in both women and men. Consequently, Flagyl is capable not only of curing trichomoniasis in women but also of preventing reinfection.

Correctly used, with due attention to repeat courses of treatment for resistant, deep-seated invasion and to the presumption of reinfection from male consorts, Flagyl has repeatedly produced up to 100 per cent cure in large series of patients.

When the diagnosis of trichomoniasis is positive, Flagyl is positive.

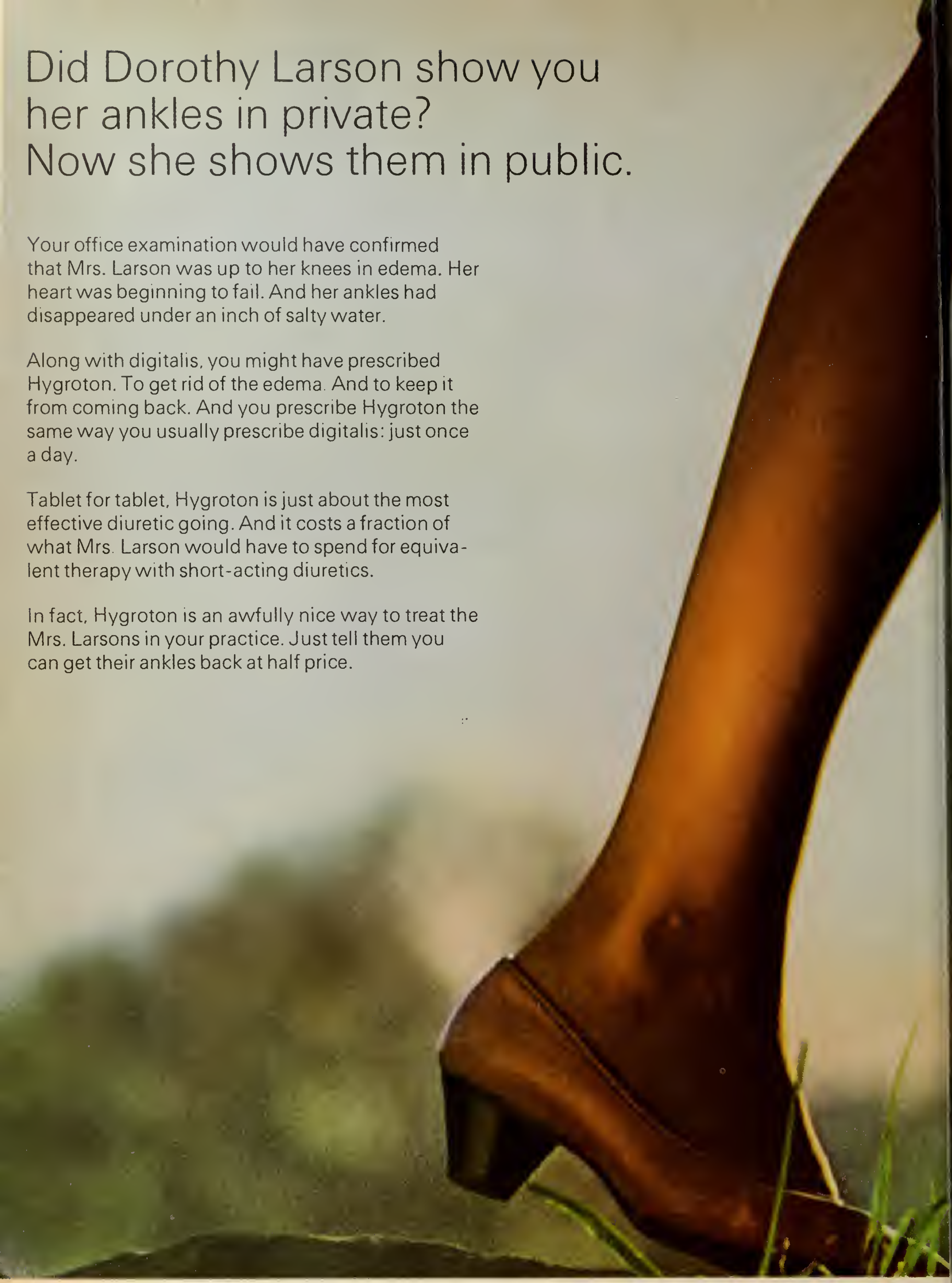
Dosage and Administration — In *women:* one 250-mg. oral tablet three times daily for ten days. A vaginal insert of 500 mg. is available for local therapy when desired. When used, one vaginal insert should be placed high in the vaginal vault each day for ten days; concurrently two oral tablets should be taken daily.
In *men* in whom trichomonads have been demonstrated: one 250-mg. oral tablet twice daily for ten days.

Contraindications — Pregnancy; disease of the central nervous system; evidence or history of blood dyscrasia.

Precaution—Complete blood cell counts should be made before, during and after therapy, especially if a second course is necessary.

Side Effects—Infrequent and minor side effects include nausea, metallic taste, furry tongue and headache. Other effects, all reported in an incidence of less than 1 per cent, are diarrhea, dizziness, vaginal dryness and burning, dry mouth, rash, urticaria, gastritis, drowsiness, insomnia, pruritus, sore tongue, darkened urine, anorexia, vomiting, epigastric distress, dysuria, depression, vertigo, incoordination, ataxia, abdominal cramping, constipation, stomatitis, numbness of an extremity, joint pains, confusion, irritability, weakness, flushing, cystitis, pelvic pressure, dyspareunia, fever, polyuria, incontinence, decreased libido, nasal congestion, proctitis and pyuria. Elimination of trichomonads may aggravate candidiasis.

SEARLE *Research in the Service of Medicine*



Did Dorothy Larson show you her ankles in private? Now she shows them in public.

Your office examination would have confirmed that Mrs. Larson was up to her knees in edema. Her heart was beginning to fail. And her ankles had disappeared under an inch of salty water.

Along with digitalis, you might have prescribed Hygroton. To get rid of the edema. And to keep it from coming back. And you prescribe Hygroton the same way you usually prescribe digitalis: just once a day.

Tablet for tablet, Hygroton is just about the most effective diuretic going. And it costs a fraction of what Mrs. Larson would have to spend for equivalent therapy with short-acting diuretics.

In fact, Hygroton is an awfully nice way to treat the Mrs. Larsons in your practice. Just tell them you can get their ankles back at half price.

Indications: Hypertension and many types of edema involving retention of salt and water.
Contraindications: Hypersensitivity and most cases of severe renal or hepatic disease.
Warning: With administration of enteric-coated potassium supplements, the possibility of small bowel lesions should be kept in mind.
Precautions: Reduce dosage of concomitant antihypertensive agents by at least one-half. Discontinue if the BUN rises or liver dysfunction is aggravated. Electrolyte imbalance and potassium depletion may occur; take special care in cirrhosis or severe ischemic heart disease,

and in patients receiving corticosteroids, ACTH, or digitalis. Salt restriction is not recommended.
Side Effects: Dizziness, weakness, nausea, vomiting, hyperglycemia, hyperuricemia, headache, muscle cramps, postural hypotension, constipation, leukopenia, thrombocytopenia, agranulocytosis, impotence, dysuria, transient myopia, skin reactions, including urticaria and purpura, epigastric pain, or G.I. symptoms after prolonged administration.

Average Dosage: One tablet (100 mg.) with breakfast daily or every other day.
Availability: Tablets of 100 mg. 6524-V(B)
For full details, see prescribing information.

...so you might say Hygroton is good public relations for Mrs. Larson

Because it gets her *out* in public in the first place. At 43, Mrs. Larson worries about appearances and swollen ankles don't help.

But Hygroton's cosmetic effect is only half the story. Hygroton and digitalis therapy helps her get back in the swing of things. Gives her a second wind. Gets rid of the extra pillow she needed for a good night's sleep. Now she even likes to take walks. Just for the fun of it!

When her troubles began, Mrs. Larson thought they were the signs of the change of life. It's a change all right, but one you can treat. And you can count on Hygroton to help keep her in public instead of in the hospital.

See preceding pages for brief summary of prescribing information.

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Editorials

The Hart Bill

"The fault, dear Brutus, is not in our stars,
But in ourselves, that we are underlings."

Certain aspects of the Hart Bill now in the Senate demonstrate loud and clear how federal intervention is at times a direct result of inaction by the medical profession. When several years ago Senator Hart became interested in "excessive costs of drugs" he subpoenaed the records of twelve drug repackaging firms in which the majority of the stock was owned by practicing physicians. He clearly stated at that time if action to correct the abuses which he felt existed was not forthcoming by organized medicine that his committee would be forced to act to protect the public. The publicity resulting from his hearings presented the profession in an untenable and unfavorable light. To facilitate action, portions of the records from the committee's hearings were turned over to the AMA.

The AMA House of Delegates upon recommendation by the Judicial Council and after serious deliberation judged it to be unethical for physicians to own stock in drug repackaging houses. The AMA had recognized its responsibility and fulfilled its obligation to society. The only failure was acknowledging the sage observation that "Lofty pronouncements without action is hypocrisy."

After a lapse of two years when Senator Hart requested an accounting of the action taken what did he discover? Only one, or perhaps two, medical societies in the entire country had taken action to divest its members of such stock. Even in these areas, as in all others, local and state medical journals were accepting money for ads from these sources which at least were questionable. Costs of medical education programs were being underwritten in part or in toto by these physician-owned repacking houses. It was obvious that they were trying to cloak themselves with an aura of respectability and the profession at large was assisting them in their effort. This is a typical example of the end justifying the means. Just as the accused before the judge confessed, "I stole the money, sir, but I put it to good use." Ignorance, apathy, and culpability played directly into the hands of the good Senator. He was able to establish clearly and factually that the medical profession had failed to act.

With this as the background he had no alternative but to propose legislation to curb the injustices which he felt existed. His bill includes far more features than repackaging houses. There are controversial portions which could be harmful to the public and the profession. However, one thing stands out, the leadership of the profession failed its members by not taking forceful action to discipline its unethical members. This is one example in which the Congress cannot be faulted. The blame rests squarely on our shoulders.

Harold E. Jervey, Jr., M. D.

Spring Officers Conference

The Annual Conference of County and State Medical Society Officers was held in Columbia on March 19. It was quite successful in every way except in attendance. Matters of great concern to all of our physicians were discussed.

It is unfortunate that so few of our elected representatives take time to interest themselves in the important activities which are bound to affect medicine tremendously. A united opinion might carry much weight in modifying various proposed regulations. Moans and groans after the establishment of the programs will accomplish nothing.

In this issue of the Journal notes on the proceedings of the meeting will be found.

Pediatricians' Contribution to the Medical College

The pediatricians of the state have passed a resolution calling on members of the group to make regular annual donations to a special fund for the Pediatric Department of the Medical College to be known as the Mylnor W. Beach Fund. The money will be used to educational purposes in any way that the Department sees fit.

PEDIATRIC FUND

RESOLUTION

Whereas the pediatricians of South Carolina wish to help financially the pediatric department at the Medical College of South Carolina, and

Whereas the Health Sciences Foundation of the Medical College of the State of South Carolina has been formed, and

Whereas this Foundation will handle funds, stocks, or bonds as the donor wishes, and

Whereas the pediatricians, meeting in Columbia, expressed a desire to give regularly to the Pediatric Department of the Medical College in Charleston, Now, therefore be it

Resolved that this committee recommend that pediatricians, and other doctors if they desire, contribute fifty dollars annually to the Foundation, and be it further

Resolved that this fund be known as the Mylnor W. Beach Fund, and be it further

Resolved that the proceeds from this Fund be used for the pediatric department as the head of the department sees fit.

Committee of Pediatric Education
George D. Johnson, M. D., Chm.
John D. Rheney, M. D.
Joseph I. Waring, M. D.

Osteopathy

At this writing the several dangerous Osteopathic Bills in the Legislature seem to have been put aside but are far from forgotten. Efforts of the Association to have the bills killed were active and successful. We owe much gratitude to our Executive Secretary, Mr. M. L. Meadors, for his untiring efforts to defeat the proposed legislation.

There was a discouraging lack of active medical pressure on some of our legislators. Perhaps this indicates that the Associations stand was not acceptable to them, but more likely it shows the usual and characteristic apathy of many of our doctors in respect to measures which affect themselves and the health of the public.

It is more than probable that similar legislation will be proposed again. If we could all educate our legislators gradually and firmly rather than put up a last-ditch effort by a few people, the chances of our continued success would be greatly enhanced.

The Pap Smear

At a recent meeting of the S. C. Division of the American Cancer Society two items of interest to all physicians in the state were announced. One by Dr. Kemper Lake described a campaign in Whitmire's schools to encourage young people to avoid smoking. The other by Dr. James Hughes described the campaign in the Springs Mills to discover cervical cancer by the use of Pap smears. In this examination of 3,800 female workers at least 49 were diagnosed as cancer. Many others were referred to their family physicians because of suspicious smears. The 49 have been treated and are back at work.

These two projects along with many others in the state exemplify preventive medicine at its best. The school project is the best way to impress young people. School health in some European countries is one of, if not, the most important place for prevention as well as treatment. The Pap smear on the employees in the Spring Mills is an ideal method of saving lives, improving labor-management relations, and maintaining an able and healthy work force. Why wouldn't Pap smears on all employment examinations be another time to help check cervical cancer? Enlightened programs like the ones mentioned serve a valuable and far reaching service. Surely employees are impressed by management's efforts to maintain and improve their health. By the same token it is much easier to impress young people with the dangers of smoking than it is to impress people who have been smoking for years. These are two excellent examples of how practicing physicians can further improve the lives of the people of our great state. We need more!!

G. D. Johnson, M. D.

MEDICAL COLLEGE OF SOUTH CAROLINA

MCSC ETV Program Selected As Outstanding

One of the Medical College of South Carolina programs has been selected for inclusion in a group of the half-dozen best medical TV programs produced in the United States. The program is "Acute Myocardial Infarction" which was recorded at the Educational Television Center in November, 1964. The University of California is making copies of these selected programs for research in the use of television in medical education.

Faculty Appointments-Promotions-Changes

Dr. William B. Irby has been appointed Professor of Oral Surgery in The School of Medicine. He also holds the appointment of Professor and Chairman of the Department of Oral Surgery in the School of Dentistry.

Dr. Alan D. Horres has been promoted to Associate Professor of Physiology and has returned on a full-time basis to the Department of Physiology from the Veterans Administration Hospital in Charleston.

Dr. H. Biemann Othersen has been appointed Assistant Professor of Pediatrics. He is also Assistant Professor of Pediatric Surgery.

Dr. George S. Croffead received the appointment of Assistant Clinical Professor of Neurology (neuro-ophthalmology). He is also Assistant Clinical Professor of Ophthalmology.

Dr. Jasper L. McPhail has been appointed Assistant Clinical Professor of Surgery. He is in the private practice of thoracic surgery in Spartanburg and is Director of Medical Education at Spartanburg General Hospital.

Dental Students Begin Studies in September

The School of Dentistry at the Medical College will admit a class of 24 freshman students this September. Members of the first class will be restricted to residents of the state. Admission requirements include at least three years of college work including courses in chemistry, physics, biology, English and mathematics and the dental aptitude test administered by the Council on Dental Education. Acceptance of the first class was made possible by confirmation last December of a federal grant for construction of two new Medical College buildings, one of which will house the School of Dentistry. The buildings are expected to be completed by 1969 when the dental students begin their clinical training.

Faculty Members Participated in Greenville Seminar

Five Medical College faculty members spoke at the 11th Greenville Post Graduate Seminar at the Greenville General Hospital in April. Dr. William M. McCord, President, gave a luncheon address on "Problems in Medical Education—1967" and introduced Governor Robert E. McNair, who was the banquet speaker. Reports on current treatment methods were presented by Dr. Milton Westphal, Professor and Chairman of the Department of Pediatrics; Dr. Ramsey Mellette, Jr., Associate Professor of Psychiatry; Dr. John C. Hawk, Jr., Associate Clinical Professor of Surgery, and Dr. Charlton de Saussure, Associate Clinical Professor of Medicine.

Dr. Putney Joins Otolaryngology Department

Dr. F. Johnson Putney has been appointed Professor of Otolaryngology at the Medical College effective July 1. He is now in private practice in Philadelphia and Clinical Professor of Laryngology and Bronchoesophagology at Jefferson Medical College.

Doctors In The News

Dr. William H. Prioleau, Jr. of Charleston is a Captain in the Medical Corp, U. S. Army, and has spent the last year assigned to the 8th Field Hospital in Nhatrang, Viet Nam. For the coming year, he will be at Martin Army Hospital, Fort Benning, Ga. **Dr. Harold E. Jervey, Jr.** of Columbia has been reelected treasurer of the Federation of Medical Boards and reappointed to the Advisory Board of Medical Specialties. **Dr. George Dean Johnson** of Spartanburg has been named to the South Carolina Regional Advisory Committee organized by the Medical College of South Carolina. Serving with Dr. Johnson and representing the Spartanburg district will be **Doctors J. P. Coan, Charles B. Hanna** and **John M. Fleming,** along with General Hospital administrator Charles Boone. **Dr. Fleming** is one of five Clemson University alumni designated recipients of the 1967 Distinguished Alumni Award of the annual alumni banquet on campus in June. Also receiving an award will be **Dr. George G. Durst** of Sullivan's Island. **Dr. Jennings K. Owens, Jr.,** Bennettsville surgeon, was mentioned in the February issue of National Geographic magazine. He was quoted by National Geographic author Peter T. White in his article entitled, "Behind the Headlines in Viet Nam". Dr. Owens spent two months in the summer of 1966 in Da Nang as a volunteer physician. **Dr. W. P. Turner** of Greenwood has been elected to the Board of Directors of Blue Cross of South Carolina. **Dr. N. B. Baroody, Jr.** of Florence, has returned from Chicago, where he spoke before the National Committee on Religion and Medicine of the AMA. As chairman of the state committee, Dr. Baroody represented South Carolina in a discussion orienting national committee members on progress made in coordinating the work of ministers and physicians in the treatment of patients. **Dr. E. A. E. Huggins** of Greenville was honored recently by the Mountain City Medical Society for his 63 years of medical practice in Greenville. **Dr. Jasper McPhail** has been appointed fulltime director of medical education at General Hospital, Spartanburg. A native of Mississippi, Dr. McPhail was chief of the Christian Hospital Medical School in India for four years. He was graduated from Baylor University and the University of Mississippi and has served as chairman of the President's Committee on Heart and Cancer.

Dr. J. Ramsey Mellette, Jr. of Charleston is the new president of the S. C. District Branch, American Psychiatric Association. Named president-elect during a meeting in Columbia was **Dr. Chapman J. Milling. Dr. Merlynn E. Borgstedt** was named secretary-treasurer.

MEETINGS

The American Rheumatism Association will hold its annual meeting at the New York Hilton, New York, June 15-16.

Write: Miss Margaret M. Walsh, executive secretary, 1212 Avenue of the Americas, New York, N. Y. 10036.

The 14th Annual Mountaintop Medical Assembly will be held June 15-17 at Waynesville, N. C. The assembly is sponsored by the Haywood County Academy of General Practice.

The IV Panamerican Congress of Rheumatology is going to be held in Mexico City October 22-26, 1967. For further information, contact Dr. Gabor Katona, Ave. Guauhtemoc 300, Mexico 7, D. F., Mexico.

The Sixth Annuual Lawyers and Physicians Conference will be held at Lake Junaluske, N. C., August 9-13.

The 1967 Annual Meeting of The Great Smoky Mountains Pediatric Seminar will be held June 15, 16, 17 at the Gatlinburg Inn, Gatlinburg, Tenn.

Mr. Fred F. Ellison, administrator, York General Hospital, Rock Hill, South Carolina, signs the first agreement, which affiliates the 200-bed Packaged Disaster Hospital and the Hospital Reserve Disaster Inventory of supplies to his hospital. Participating are, from left, Dr. W. R. Sims, chairman, hospital board, Mr. Ellison, Dr. Alton Brown, staff physician; standing, Rock Hill Mayor David Lyle.

Redirection of the Emergency Medical Stockpile Program

"An aspirin tablet could be worth its weight in gold". This statement might well be true if we were subjected to a major natural disaster or an enemy attack and physicians were without medical supplies and equipment. If manufacturing facilities, wholesalers and other sources of medical supplies were destroyed, hospitals would be without insulin to treat diabetes, without antibiotics to treat infections, without intravenous solutions so necessary for combating shock and burns; and even without anesthetics to alleviate the suffering from surgery. The purpose of redirecting the Medical Stockpile Program is to prevent this situation from occurring.

Hospitals throughout the State will be encouraged to agree to affiliate with elements of the Emergency Medical Stockpile which include the 200-bed Packaged Disaster Hospital, a 30-day reserve inventory of medical supplies for rotation and other items to be rotated from the Packaged Disaster Hospital.

Dr. E. Kenneth Aycock, who signed the Master Agreement said, "This program will place in the hands of physicians emergency medical supplies and materials essential for the provision of good health services".

Following review of the Stockpile Program, Mr. Grant Hurst, Executive Director, South Carolina Hospital Association, said, "This program of affiliating the Emergency Medical Stockpile to existing hospitals throughout the State is both realistic and sound and provides our hospitals with thousands of additional emergency beds".

Mr. Fred E. Ellison, Hospital Administrator, York General Hospital, was the first to sign an agreement which affiliates a 200-bed Packaged Disaster Hospital together with the 30-day inventory and additional items for rotation from the Packaged Disaster Hospital. When signing the agreement, Mr. Ellison said, "This is the only way the Emergency Medical Stockpile can be efficiently handled. It places in the community, emergency medical supplies, should the need ever arise."

Report of The Sub-Committee on Mental Retardation of The South Carolina Medical Association

A meeting of the Committee on Mental Retardation was held at Whitten Village April 5, 1967.

Present:

Dr. B. Owen Ravenel, Chairman
Dr. Frank R. Wrenn, Jr.
Dr. Robert C. Brownlee, Jr.
Dr. Roy Suber
Dr. R. Bruce Ford
Dr. John W. Blanton

Doctors Ravenel and Wrenn will serve one year, Doctors Brownlee and Blanton two years and Doctors Suber, White and Ford three years on the committee.

After a delicious luncheon served by Whitten Village and a very interesting tour of the facilities conducted by Dr. Suber, the committee meeting was held.

After much discussion, the following recommendations were endorsed unanimously.

1. The committee endorsed Bill H-1415, as written, setting up a State Department of Mental Retardation which is under consideration by the State Legislature and recommends that the South Carolina Medical Association go on record as endorsing it.
2. The committee recommends that the Commissioner of Mental Retardation be an M. D.
3. The committee feels that referrals of patients to diagnostic and evaluation clinics serving the mentally retarded should be limited to physician referrals.
4. The committee recommends that Council take under consideration and discussion some means of restricted licensure of foreign M. D.'s so that they can practice in State Institutions.

B. Owen Ravenel, M. D., Chairman

NEWS

An institute on Modern Trends in Handling The Chronic Alcoholic Offender was held March 31 and April 1 at the University of South Carolina. The institute was co-sponsored by the South Carolina Medical Association, the South Carolina Bar Association, the South Carolina Department of Mental Health and and the South Carolina Alcoholic Rehabilitation Program.

"What You Should Know About Schizophrenia", published by the American Schizophrenia Foundation, is in its fifth printing and may be obtained from the American Schizophrenia Foundation, 230 Nickels Arcade, Ann Arbor, Michigan 48108 for 50 cents.

"Guides to the Evaluation of Permanent Impairment—Mental Illness", a booklet developed by the Committee on Rating of Mental and Physical Impairment of the AMA has recently been published.

This guide has been designed primarily for use by physicians and a limited number of copies may be obtained, without charge, upon written request to the Committee on Rating of Mental and Physical Impairment, 535 North Dearborn St., Chicago, Ill. 60610.

The American Cancer Society has produced a new professional film entitled "Diagnosis and Management of Cancer of The Colon and Rectum" which is now available through the S. C. Division, Columbia, office.

Warren H. Cole, M.D., F.A.C.S., professor and head, Department of Surgery University of Illinois College of Medicine, was the medical consultant for the film, and appears in it.

The 16 mm. film runs 17 minutes and is in color.

Now in the press and shortly to be
published by the
South Carolina Medical Association
Volume 2
of
A History of Medicine
in South Carolina
By Joseph I. Waring, M. D.
covering the period 1825 to 1900.

This book is a continuation of the first volume, published in 1964, whose story ended at 1825. The preceding volume was well received by medical historians.

The second volume will soon be available.

For a limited period members of the South Carolina Medical Association are entitled to purchase this book at $3.25 postpaid. Orders may be placed now.

It's price on the market will be $7.75 postpaid.

Advance Order Form

South Carolina Medical Association
Historical Committee
80 Barre Street
Charleston, S. C. 29401
Gentlemen:

Please send me ____________ copies of the book "A History of Medicine in South Carolina, 1825-1900", by Joseph I. Waring, M. D. at $3.25 per copy.

Payment enclosed.

____
Name

____
Address

____
City and State, Zip

Please make check payable to:
S. C. Medical Association,
Historical Committee

V D NEWS

PRIVATE PHYSICIAN PARTICIPATION IN SYPHILIS CONTROL IN SOUTH CAROLINA

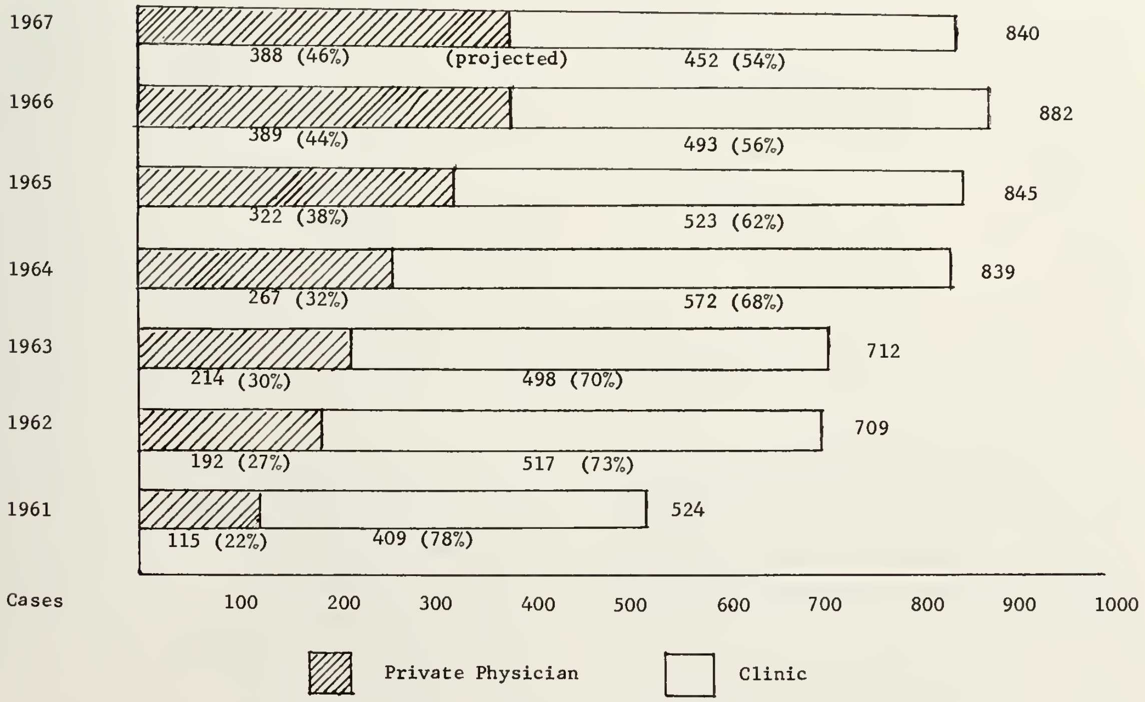
R. WILSON BALL, M. D.

During the resurgence of infectious syphilis in the late 1950's and the early 1960's (which has continued to the present day), most of the infected patients were being treated in county health departments. A high percentage of these cases did not receive adequate epidemiologic follow up, due to a shortage of public health workers to interview the infected patients and to refer their contacts to physicians for examination and possible treatment. This limited the private physician in his ability to participate in syphilis control.

In recent years the epidemiologic follow up of early syphilis patients has been implemented considerably, including additional trained personnel who now work more closely with the private physicians in this State. Physicians have become very much aware of the syphilis problem throughout the State and the accompanying chart indicates their increasing support of the control program.

In 1961 only 22% of the total number of infectious syphilis cases were being treated in private offices. By fiscal year 1966, 44% of all infectious cases were being treated in the offices of GP's, dermatologists, internists,

SOUTH CAROLINA STATE BOARD OF HEALTH
V. D. CONTROL DIVISION
PRIMARY & SECONDARY SYPHILIS MORBIDITY
PRIVATE CASES VS. CLINIC CASES
Fiscal Years 1961 - 67



pediatricians, proctologists, and others. Actually, specialists in all branches of medicine are seeing syphilis, although some of these cases are not being recognized in the early stages.

Reporting by private physicians at the present time is excellent, and is leading many other states in this procedure. Even so, however, our records indicate that reporting is still not complete. Before we can reach the point of adequate control, it is necessary that physicians report *all* cases of syphilis which are seen, diagnosed, and treated. We can well understand a physician's reluctance to report certain cases but it should be borne in mind that each case diagnosed and not reported to the State Board of Health defeats our epidemiologic efforts and facilitates the spread of syphilis in the community.

All cases reported are accepted in absolute confidence and no identifying information on any venereal disease case may be released to anyone other than legally constituted authorities, except upon a direct order from a court of law. This attitude toward absolute confidentiality has been maintained for many years. However, even though all privately treated cases of syphilis are not being reported to the Public Health authorities, the percentage is a great deal higher than it was in 1961. If all cases treated by private physicians were reported by name to the State Board of Health, and the VD field representatives thus given an opportunity for carrying out the necessary epidemiology, the reduction in cases of syphilis per year could well be dramatic.

1962 S. C. grad presently 2nd year med. resident desires 2 wk. locum tenens during vacation. Occasional weekend coverage may also be possible. Reply Journal.

Well established Solo Pediatric Practice (with coverage arrangements) available in Aiken, South Carolina. Contact James E. Padgett, Jr., M. D., 137 York Street, South East, Aiken, South Carolina 29801.

NEW MEMBERS

Dr. Charles N. Still
Wm. S. Hall Psy. Institute
Columbia, S. C.

Dr. Cyril O. Spann
2226 Hampton St.
Columbia, S. C.

Dr. Hugh H. Ridlehuber
Wm. S. Hall Psy. Institute
Columbia, S. C.

Dr. Robert M. Prince, Jr.
1845 Assembly St.
Columbia, S. C.

Dr. Wm. F. Bultman, Jr.
110 S. Washington St.
Sumter, S. C. 29150

Dr. Malcombe A. McAlister
Box 457
Belton, S. C.

Dr. Samuel M. Wilkes, Jr.
Grace Bleachery
Lancaster, S. C. 29720

Dr. W. H. Siddon
P. O. Box 2258
Donelson, Tenn. 37214

Dr. Wm. N. Bennett
Hemingway, S. C.

Conference of County and State Medical Society Officers

Wade Hampton Hotel, Columbia, South Carolina

Sunday, March 19, 1967

NOTES MADE FROM ADDRESSES

I. Comprehensive Care Services—E. Kenneth Aycock, M. D., S. C. State Health Officer.

Dr. Aycock began his talk by recalling the National Comprehensive Health Care Planning Act 89749 which has as its purpose the coordination of all present plans into a more meaningful service. It was announced that the Governor has appointed the State Board of Health to plan for the above coordination. Dr. Aycock reviewed the services presently being given and stated that the public is demanding care as a right and that the Health Department had a duty to secure all health needs not presently being supplied. He noted that we are now embarking on a regional program of heart, stroke and cancer at the Medical College.

Adequate financing is a must if we are to supply optional health services for all citizens. The private doctor is the key to our system and all other health facilities must support him.

Health planning must be carried out in the communities with a full range of services being offered some of which must be supplied by Health Departments. Undoubtedly the Public Health Programs must be augmented by private resources. Today there is much fragmentation of medical care and it is given on an irregular basis.

Each person must have his own private physician who in turn will work with the public health people and social service. All information will be channeled through the family physician who will serve as a guide to family medical planning.

It is Dr. Aycock's feeling that as much of the health care as possible should be delegated by the physician and he indicated that in his opinion the use of para-medical personnel does not lower the type of care, but improves it when there is careful guidance by the physician.

Dr. Aycock returned in his discussion to the single state health planning agency which has been delegated by the Governor to be the State Board of Health. He indicated that they must have the cooperation of all involved and assured us that the funds would not be used to interfere with the private practice of medicine. It is planned to involve the physician in the planning and the State Health Planning Council hopes to have local and regional planning councils chaired by M.D.'s to guide the expenditure of funds on the local level. The state will take direction from the local council.

The local health planning councils will have the following responsibilities and duties:

1. Community determines needs for health.
2. Determines primary plan and alternate solutions.
3. Community sees that all existing resources are brought to bear for maximum good.
4. Comprehensive health care plan developed.
5. Many community groups to be involved as no one group has all of the answers.
6. The system must be concerned with quantity as well as quality.
7. Assurances that there will not be concentration on certain specialties (Medical or para-medical).
8. Ways and means of assisting patients to get into medical pipe line.

9. Watch over the whole process and upgrade the quality and quantity of total health care whenever possible.

Dr. Aycock emphasized that the primary function of the State Planning Council was expending health monies in the state and could be likened to the Hospital Advisory Council for Hill-Burton funds, the Health Department will have no jurisdiction over Title 19 funds, but will advise. The National Government is shifting the responsibility for health planning back to the states and in this state it is being sent back to the communities.

QUESTION AND ANSWER PERIOD:

Question: This program looks like we are denying individual responsibility. How do we make the patient responsible?

Answer: Must make patient aware of need for care and educate him concerning how to get it.

Question: Government asking to use paramedical personnel more and more, but all of paperwork must be done by doctor. This will increase overburdening paperwork—what can we do?

Answer: (Fed. Gov. Rep.) I suggest that the method of keeping office records be changed to support social security needs.

Observation: Unless solve manpower problem all of this will only make matters worse.

II. Consideration of Title XIX—Dr. Arthur Rivers, Director South Carolina Department of Public Welfare.

Dr. Rivers began by reviewing Title 18 and the benefits presently being received. He noted that the Welfare Department was involved in 24,000 eligible recipients in South Carolina by paying the $40.00 deductible, the $3.00 monthly part B charge and the $5.00 a day additional care fee. He was concerned about many people in skilled nursing homes who must finally go home and can not benefit in the future because of no break in illness. He emphasized the need for providing care for these people.

It was announced that the South Carolina Department of Welfare would administer Title 19 and would begin July 1, 1967. The department needs help from the physicians on five types of basic services:

1. In-patient
2. Out-patient
3. Laboratory and x-ray
4. Skilled nursing care
5. Physicians

At the present time a consultant is studying the cost of the five basic services and is expected to report shortly. It was estimated that the cost to the state in 1967 would be $2,000,000 for a $12,000,000 program. Other cost figures were given which were not clear to the recorder.

The State Board of Health is to maintain control over licensing and will set minimum standards. There will be a special advisory committee appointed by the Governor and will include many individuals, but must include at least one pediatrician. An agreement with the State Board of Health to accept any crippled child under Title 5 (crippled children) has been reached.

As of July 1, 1967, the following will be covered under either Title 18 or Title 19

1. All over 65 years of age.
2. All children under 21 years of age if eligible for dependent care.
3. Blind.
4. Those 18 years of age and older who are totally and permanently disabled.

(It was noted that the number of those receiving aid to dependent children and old age assistance was down in the last few years, but the number who were receiving aid because of permanent and total disability was up.

CHARGES FOR PHYSICIANS

Usual and customary in *community* will be paid.

PAPERWORK

Trying to reduce by using simple form, but audit system limits here.

DEPARTMENT OF PUBLIC WELFARE SERVICE

24 hour service in the community.

ELIGIBILITY

Applicant will be approved within 30 days and can be approved retroactively back 90 days as long as application made during life of applicant.

CONFIDENTIALITY

All medical information restricted except in certain administration situations. Court has upheld right to restrict.

The program is presently being worked out in South Carolina and a financial study is nearing completion. South Carolina can go two ways – restrict to present group plus 1350 foster children or go beyond and take in all under a certain fixed income. The basic cost of the latter would be $6,878,000 (?) to the state and the rest of the $36,000,000 total made up by the Federal Government. If dentistry and drugs are added to the basic the state portion would be $8,940,000 for a $46,000,000 program.

The present plans call for a program to include 76,000 persons with a contribution from the state of 2 million plus for a $12,000,000 program. A system of financing was discussed which amounted to 50¢ per capita in the state–added other Medicare monies made available (this is a rough discussion of finances)

Question: Doctors in New York have not been paid, What will happen here–

Answer: Payment will be made by 10th of each month.

Comment: Several titles will be phased out by January 1, 1970 regardless of what we do with Title 19.

Question: Since number on rolls have decreased markedly, have expenditures decreased?

Answer: The Welfare Department has had to keep the level of expenditure up to 1964 levels in order to receive Federal Funds. The funds have been used by increasing grants. Average grant to old age $42.00 per month and $19.80 per month to a dependent child.

Comment: Several other states have found Welfare Department to cause a mess.

Answer: We don't have any such plan here.

III. Current Status of Medicare – Mr. R. E. Williamson, Atlanta, Regional Representative of HEW for South Carolina

There was a general discussion of freedom which physicians have under Medicare and then a discussion of form 1490. Mr. Williamson emphasized that this form could be used without taking an assignment, but that he personally felt that the assignment was of considerable advantage. The amount of information which is given on this form is the minimum necessary to make a decision as to payment and his answer to the objection raised to this form because of making changes in the office of the physician was that the physician move to using government forms all together. In the case of no assignment, the patient can collect the money himself and may or may not pay the physician.

Mr. Williamson made a strong point to the physician to spell out what has been done when it is different, particularly when it is more than the usual charge for such a procedure as this will facilitate payment without writing back asking for additional information.

On certification, stamping the progress notes and initialing them is satisfactory, however, the notes must support certification. There has been no real change in the recertification.

In discussing utilization, Mr. Williamson indicated that there were two types of reviews:

1. Planned look at sampling of admissions which is purely education and the committee must be composed of at least two physicians. In many areas it has been suggested that a nurse could be very helpful to this committee.
2. The hospital prepare its own definition of long care cases and then review. Much weight is being given the report of the individual physician in the utilization and review committee and it is the speakers opinion that this committee is primarily one of awareness.

Mr. Williamson indicated that the Medicare program was aware that there was considerable need for planning and they were willing to participate in the cost of planning in the community.

A brief review of the facilities eligible for Medicare was given.

There are 107 hospitals in South Carolina, 66 of which have been approved, 6,761 beds or 80% of the total beds in the state has been approved. There are 89 extended care facilities, 49 have been approved. He indicated that this coverage was better than any other state in the region.

Under Part B of Medicare in the week of March 2nd, $107,000.00 was paid in South Carolina and a total of $1,704,615.00 has been paid under Part B since July 1, 1966. In his opinion, the carrier is doing a good job. The fee used was the usual and customary and should be no higher than the carrier's usual base fee. 97% of the fees in South Carolina charged by physicians have fallen within the usual and customary area. 3%—the majority have had to go back and get additional information and many of these were then paid. Mr. Williamson again indicated that planning was something that was greatly needed and emphasized that Medicare would like to stress the need for community planning.

There was a good bit of conversation about non-approved hospitals and their problems particularly relative to their emergency problems. A question was asked about the utilization of government hospitals as opposed to utilization for Medicare and it was indicated that they were not the same.

IV. Status of Blue Cross-Blue Shield — Mr. Roy L. Grady, Director of Enrollment, South Carolina Blue Cross-Blue Shield Plans.

Mr. Grady made several points which I believe can be placed in a one, two, three fashion.

1. Never a time in the history of this country when there was a greater need for Blue Cross.
2. The predicted cost of hospital stay by 1975 will be over $100.00 per day.
3. Blue Cross and Blue Shield are instruments for hospitals and doctors receiving money.
4. Blue Cross-Blue Shield is now receiving 7% of the premium and paying 20% of the hospital cost in the state.
5. To keep rates that are now present must have more people insured and they need the cooperation of the hospital and the doctor.
6. Hospital rates are going up at the rate of 12% to 20% a year.
7. Blue Cross-Blue Shield is now putting emphasis on upgrading coverage and more employer participation. The surgical schedule which they are advocating is $325 to $425.00.
8. The Blue Shield is currently working on a contract which will pay the entire doctors bill. This will be based on income. For a $3,000 a year income a schedule of $325.00, for $6,000 a schedule of $375.00, for $7,500 up, a schedule of $425.00.
9. At the present time the enrollment in the Blue Cross-Blue Shield in South Carolina is 309,000.
10. The principal problems of Blue Cross-Blue Shield today are those of getting employees and salesman.
11. In 1966 there were 52,034 claims paid for a total amount of $9,157,300.00 or 20% of the hospital income. The claims for Blue Shield in 1966 were $2,500,507.00 — the FEB payments were $1,126,659.00. It is predicted that in 1967, there will be more payments paid to physicians because of the upgrading of benefits and Mr. Grady asked all doctors to remind their patients to request upgraded coverages.

Mr. Grady emphasized that the job of professional and hospital relations has suffered considerably during the past few months by lack of communication and for other reasons and that they were going to make every effort to be available to the medical profession to attend meetings, for consultation, etc.

There was considerable discussion concerning the recent million dollar building which was built in Columbia and the Blue Cross-Blue Shield's point of view is that this is the best investment that they had ever made. It cost $1,232,000.00 for 70,000 sq. ft. or $15.00 per square foot. They have 216 employees in this office, 61 of which are Medicare employees and the building is already too small and they are having to move into other areas.

Mr. Jack Henley of Blue Cross Medicare indicated that Blue Cross for Part A has paid 27,500 bills for a total of $7,600,000.00 and under Part B has paid 43,000 bills for a total of $1,900,000.00. It was again emphasized that there has been, as far as Part B is concerned, 83,000 individual items of service and 97% of them were considered to be reasonable and customary. 54% of the doctors in South Carolina are requesting assignments and all statements are processed within 14 days. 95% of the bills submitted by the patient himself are incorrect and have to be sent back. It was noted that the medical costs are rising and was suggested that changes were going to need to be made. It was further suggested that a planning agency was needed and that substandard facilities should be closed. Mr. Grady indicated that many states were using relative value scales.

A statement was made from the floor by one of the attending physicians, calling Blue Cross-Blue Shield to task for asking physicians at a recent meeting to vote on something which they knew nothing about and had no way of knowing anything about. This was not answered satisfactorily.

PENDING STATE LEGISLATURE – M. L. Meadors, Executive Secretary and Counsel, South Carolina Medical Association.

Mr. Meadors discussed osteopathic legislation and where it stood today, giving historical information concerning the legislation, and asking for help in contacting the legislators in the various areas of the state.

There was a discussion of scholarships to the medical college which has been brought up in the legislature. There are two bills to provide scholarships – one at our medical school and the other for any qualified student who was not able to get into our own medical school, but who was admitted to an out of state school.

The Blue Cross-Blue Shield legislation was discussed – The meeting was adjourned.

Willard B. Mills, M. D.

Deaths

Dr. Frank Turner Harrat

Dr. Frank Turner Harrat, a resident of Crosland Park, Aiken, since last summer, died March 19 in St. Joseph's Hospital, Augusta, after a short illness.

Dr. Harrat was for many years a medical practitioner in Frostburg, Maryland, where he had a wide reputation for his treatment of respiratory diseases.

Dr. Harrat graduated from Trinity School, New York in 1926; attended Amherst College, Mass., Columbia Physicians and Surgeons from which he graduated in 1935. He served his residency in Orange Memorial Hospital, Orange, N. J., his residency in pulmonary disease in Lennox Hill Hospital, New York, surgery in Lawrence Hospital, Bronxville, N. Y.

Dr. Victor L. Kruger

Dr. Victor L. Kruger, 72, native of Hungary and a Whitten Village doctor for the past four years, died March 22 after a long illness.

A native of Nagyvarard, Hungary, he was graduated from the University of Budapest. Dr. Kruger had practiced medicine and surgery in Budapest and New York, prior to coming to South Carolina and had served on the medical staff of the State Hospital in Columbia for 10 years before joining the staff of Whitten Village.

He served with the medical corps of the Hungarian Army as a full colonel before fleeing from the Russian invasion in 1945.

New Pharmaceutical Specialties

by Paul De Haen

For detailed information regarding indications, dosage, contraindications and adverse reactions, refer to the manufacturer's package insert or brochure.

Single Chemicals—Drugs not previously known, including new salts.

Duplicate Single Products—Drugs marketed by more than one manufacturer.

Combination Products—Consisting of two or more active ingredients.

New Dosage Forms—Of a previously introduced product.

NEW SINGLE CHEMICALS

SYMMETREL

Antiviral. Rx

Manufacturer: E. I. du Pont de Nemours

Nonproprietary Name: Amantadine HCl

Indications: Prophylaxis of respiratory infections caused by influenza A_2 (Asian) virus strains.

Contraindications: Not to be used in patients with established A_2 influenza or other respiratory illness.

Dosage:
Adults—200 mg daily.
Children—(1 to 9 years) 2 to 4 mg/lb/day not to exceed 150 mg
(9 to 12 years) 100 mg twice a day.

Supplied: Capsules—100 mg; bottles of 100.
Syrup—50mg/5ml; one pint bottles.

DUPLICATE SINGLE PRODUCTS

KLORT

Ataraxic and tranquilizer. Rx

Manufacturer: Lemmon Pharmacal Co.

Nonproprietary Name: Meprobamate

Indications: Management of anxiety or tension.

Contraindications: In cases where idiosyncrasy or hypersensitivity to meprobamate exists.

Dosage: 400 mg, 3 or 4 times daily.

Supplied: Tablets—400 mg; bottles of 100 and 1000.

PROTRAN

Ataraxic and tranquilizer. Rx

Manufacturer: Carrtone Laboratories

Nonproprietary Name: Meprobamate

Indications: Management of anxiety or tension.

Contraindications: In cases where idiosyncrasy or hypersensitivity to meprobamate exists.

Dosage: 400 mg, 3 or 4 times daily.

Supplied: Tablets—400 mg; bottles of 100 and 1000.

COMBINATION PRODUCTS

PORTAGEN

Nutrient. o-t-c

Manufacturer: Mead Johnson

Composition: Medium chain triglycerides

Indications: For persons who have difficulty in absorbing conventional fats.

Dosage: Not stated.

Supplied: Powder, unflavored—in 1 pound cans.

2/G

Cough Preparation. o-t-c

Manufacturer: Pitman-Moore

Composition:

Each 5 ml contains:

Glyceryl guaiacolate	100.0 mg
Chloroform	13.5 mg
Alcohol	5 %

Indications: Symptomatic treatment of respiratory conditions associated with cough and the presence of thick tenacious exudate in the lower respiratory tract.

Dosage:
Adults—1 tsp. every 3 to 4 hours, as necessary.
Children—6 to 12 years—one-half of the adult dose.

Supplied: In 4 oz bottles.

NEW DOSAGE FORMS

ATARAX ISOJECT

Ataraxic and tranquilizer. Rx

Manufacturer: J. B. Roerig & Co.

Nonproprietary Name: Hydroxizine HCl

Indications: Anxiety and tension of various origins; as an adjunct to treatment of alcoholism; allergic conditions with strong emotional overlay.

Contraindications: Not for subcutaneous or intraarterial injection; in patients with hypersensitivity to it; in early pregnancy.

Dosage:
Adults—i.m. or i.v.—25 to 100 mg singly or every 4 to 6 hours depending on condition.
Children—i.m.—0.5 mg/lb. body weight.

Supplied: Disposable syringes—25 mg/ml; 50 mg/ml; 100 mg/2 ml

VALIUM

Ataraxic and tranquilizer. Rx

Manufacturer: Roche Laboratories

Nonproprietary Name: Diazepam

Indications: Tension and anxiety states, adjunct to treatment of alcoholism, prior to minor surgical procedures to alleviate muscle spasm associated with cerebral palsy and athetosis.

Contraindications: Infants, patients with a history of convulsive disorders or glaucoma, patients with a known hypersensitivity to diazepam.

Dosage. i.m. or i.v.—2 to 10 mg, every 3 to 4 hours. Not more than 30 mg should be given within an 8-hour period.

Supplied: Ampuls—10mg/2 ml; in boxes of 10.

FACTS COUNT

IN PLANT SITE SELECTION

facts count, too, in selecting health care coverage

Companies selecting South Carolina sites for new plants invested over half a billion dollars on new manufacturing facilities in 1965, more than double the previous year's record. This brings the new industrial investment figure for the past six years to a high of nearly two billion dollars. During this period, well over 100,000 new job opportunities were created in South Carolina.

Many facts count for companies in selecting plant sites. A ready labor market, low utility costs, favorable tax rates, and the total cultural environment of the area are some of the facts that count for companies coming to the Palmetto State.

Facts about health care coverage count for companies when they review employee benefits. Some 2,500 South Carolina companies have already made the facts count. They have chosen Blue Cross and Blue Shield. It's the realistic health care program because coverage is based on the actual care required for recovery. Another fact that counts for new as well as long-time South Carolina industries . . . dues are determined by the health care needs of South Carolinians.

Call your experienced Blue Cross and Blue Shield representative soon. When he has given you all the facts about health care coverage, you'll choose Blue Cross and Blue Shield.

Blue Cross®-Blue Shield®

This ad, in behalf of health care coverage, is appearing in daily and weekly newspapers throughout South Carolina.

Blue Shield of South Carolina · I-20 E at Alpine Road, Columbia, S. C.

Book Reviews

PRIMER ON PREMATURITY AND HIGH-RISK PREGNANCY, by Gorham Babson, M. D. and Ralph C. Benson, M. D. C. V. Mosby Company, Saint Louis. 1966. Pp. 194. $10.50.

The authors, an associate professor of pediatrics, and a professor and chairman of the department of obstetrics and gynecology of the University of Oregon Medical School and Hospitals, have collaborated in producing a book which has much merit.

Special consideration for the physician whose responsibility extends from early pregnancy through the puerperium and includes the neonate is a major objective of this book.

The book considers the important complications of pregnancy which lead to premature delivery, current methods of diagnosis and treatment, and the care of the newborn when preventive measures fail to delay untimely birth.

A particularly valuable section is that on specific diseases and drug hazards affecting the fetus. Another excellent feature is its straightforward approach to the emergency and routine care of the high-risk infant at birth.

Many busy practitioners and house officers who care for the high-risk pregnant mother and the premature infant often are at a loss for concise and easily available information regarding these patients. This book supplies this need, and the subject material is presented with directness and brevity—often in outline form to aid the reader.

It can be well recommended.

William B. Gamble, Jr., M. D.

A MANUAL OF TROPICAL MEDICINE, G. W. Hunter, W. W. Frye and J. C. Swartzwelder, 4th Ed., W. B. Saunders Co., Philadelphia, 1966. $18.50.

The need for a current reference book describing less commonly encountered infectious diseases prevalent in other countries can hardly be questioned. This text ably fills this need. As aptly stated by the authors, "Our medical students of today, through military, Peace Corps and other governmental and private agencies, will be responsible for the medical care of military and civilian personnel throughout many areas of the world."

The title of this book is a misnomer for several reasons. Although still portable, the current edition is much expanded and considerably thicker than the earlier "manual". Discussion of many subjects goes into considerable depth in describing clinical features, treatment, epidemiology, etc. While some of the included infections such as yaws, pinta and Queensland tick typhus fall into the category of "exotic diseases" suggested to this reviewer by the title, more often the text deals with infections commonly encountered in this country such as arbovirus infections, murine typhus, American spotted fevers, mycotic infections, amebiasis, etc.

Thirty-seven authorities including recognized leaders in each field have contributed to this volume. The material and references are remarkably up-to-date. Illustrations are excellent and the epidemiologic charts, familiar to most students from earlier editions, have been continued.

This text should be of value to the military physician serving on foreign shores, to the practicing physician who wishes to know the latest treatment for hookworm or creeping eruption, to the the hospital-based physician in the differential diagnosis of unusual infectious diseases. It can be highly recommended as a useful addition to the library of anyone engaged in the practice of medicine.

Louis P. Jervey, M. D.

CURRENT PRACTICE IN ORTHOPAEDIC SURGERY, by John P. Adams, Volume 3. C. V. Mosby Company, St. Louis, 1966. Pp. 272. Price: $18.75.

The title of this book is somewhat deceiving in that one might surmise it is a review of current practices in orthopaedic surgery in general. This is not the case. The book contains 272 pages of material plus index. The limited number of subjects in no way detracts from its interest and value, but rather, in my opinion, enhances it.

There are two biographys of early American orthopaedic surgeons and an excellent section of four chapters dealing with orthopaedic surgery in cerebral palsy. There is another section of four chapters in which one chapter is on tibia vara and a chapter I found of considerable interest on mechanical stresses on lumbar discs. In addition there were chapters on digital transposition, hip nailing, and muscle testing of the upper extremity. An interesting chapter on psychiatric aspects of backache concluded the book. The authors of all chapters are prominent in their respective fields.

The book is highly recommended.

B. L. Freeman, Jr., M. D.

QUIDNUNC

How Slowly Time Passes!

Miss Lila Bradham, community consultant with the South Carolina Mental Health Association, spent a day and a half (with the exception of three months) in Charleston this past year, with headquarters at the Charleston County Health Department. (*News Letter* of the South Carolina State Board of Health.)

Our copy editors have long waged war against jargon. While they admit that it might have its place in the corridor or dressing room; there is no place for it in a book. They were pleased to find an ally in the recently published *Modern American Usage* (Hill & Wang, New York, 1966) which has this to say about jargon:

"It is commonplace that the professions tend to develop jargons, but it is less often recognized that the modern professions make their jargons pedantic, as the older jargons of sailors, farmers, and thieves were not. Today a person interested in the public schools is exposed to reading a report on the playing of background music in classrooms which says "*The hypothesis, therefore, is that music can reduce the intensity dimension of the student so that he remains in the range of effectiveness along the continuum*'." Enough said!

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The Journal of the South Carolina Medical Association

May 1917

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Side Effects: Side effects (usually dose-related) are fatigue, drowsiness and ataxia. Also reported: mild nausea, dizziness, blurred vision, diplopia, headache, incontinence, slurred speech, tremor and skin rash; paradoxical reactions (excitement, depression, stimulation, sleep disturbances, acute hyperexcited states, hallucinations); changes in EEG patterns during and after drug treatment. Abrupt cessation after prolonged overdosage may produce withdrawal symptoms (convulsions, tremor, abdominal and muscle cramps, vomiting, sweating) similar to those seen with barbiturates, meprobamate and chlordiazepoxide HCl.

Dosage—*Adults:* Mild to moderate psychoneurotic reactions, 2 to 5 mg b.i.d. or t.i.d.; severe psychoneurotic reactions, 5 to 10 mg t.i.d. or q.i.d.; alcoholism, 10 mg t.i.d. or q.i.d. in first 24 hours, then 5 mg t.i.d. or q.i.d. as needed; muscle spasm with cerebral palsy or athetosis, 2 to 10 mg t.i.d. or q.i.d. *Geriatric patients:* 1 or 2 mg/day initially, increase gradually as needed and tolerated. (See Precautions)

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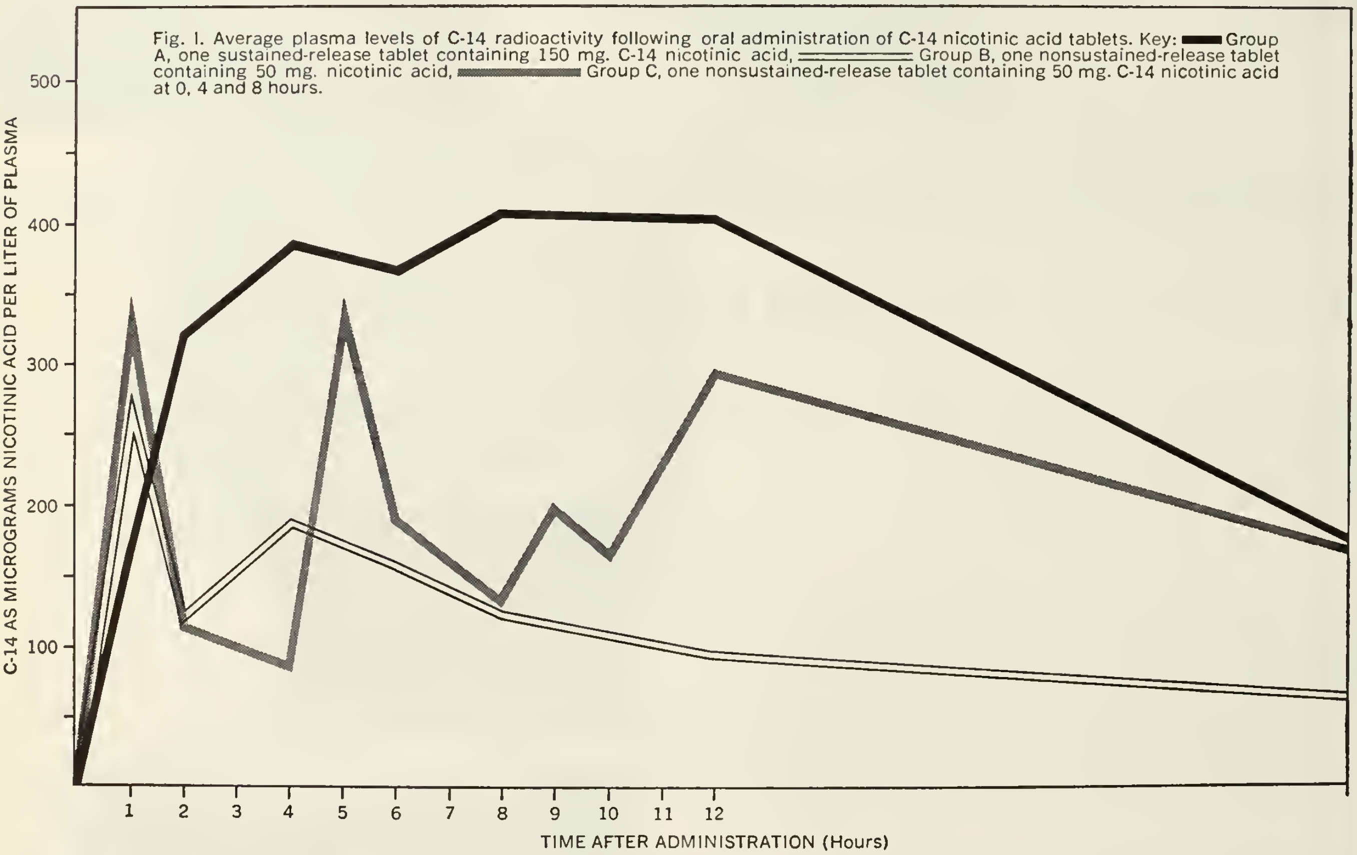

Fig. I. Average plasma levels of C-14 radioactivity following oral administration of C-14 nicotinic acid tablets. Key: ▬ Group A, one sustained-release tablet containing 150 mg. C-14 nicotinic acid, ═ Group B, one nonsustained-release tablet containing 50 mg. nicotinic acid, ▬ Group C, one nonsustained-release tablet containing 50 mg. C-14 nicotinic acid at 0, 4 and 8 hours.

(fewer absent doses by absent-minded patients)

Human volunteer subjects were administered Geroniazol TT tablets with the nicotinic acid component made radioactive with C-14. Plasma and urine samples were analyzed. (See Figures I and II) The radioactive tracer study substantiated the previous clinical evidence that the release of nicotinic acid from the Geroniazol TT tablet produced a gradual rise in plasma levels to a plateau for a total of 12 hours and more.

Such proven sustained activity makes the management of geriatric patients much easier by minimizing the possibility of neglected doses through absent-mindedness or senile confusion. Therapy *can* be continuous on a daily dose of only one Geroniazol TT tablet every 12 hours.

The gradual release of nicotinic acid in Geroniazol TT will provide the well-known peripheral vasodilatation needed in patients with deficient circulation and with a minimum amount (if any) of "flushing." Also, cerebrovascular circulation is complemented by pentylenetetrazol, long-established as a cerebral and respiratory stimulant.

Geroniazol TT improves the typical, unfortunate, signs of senile confusion. Patients become more alert,

ged and debilitated

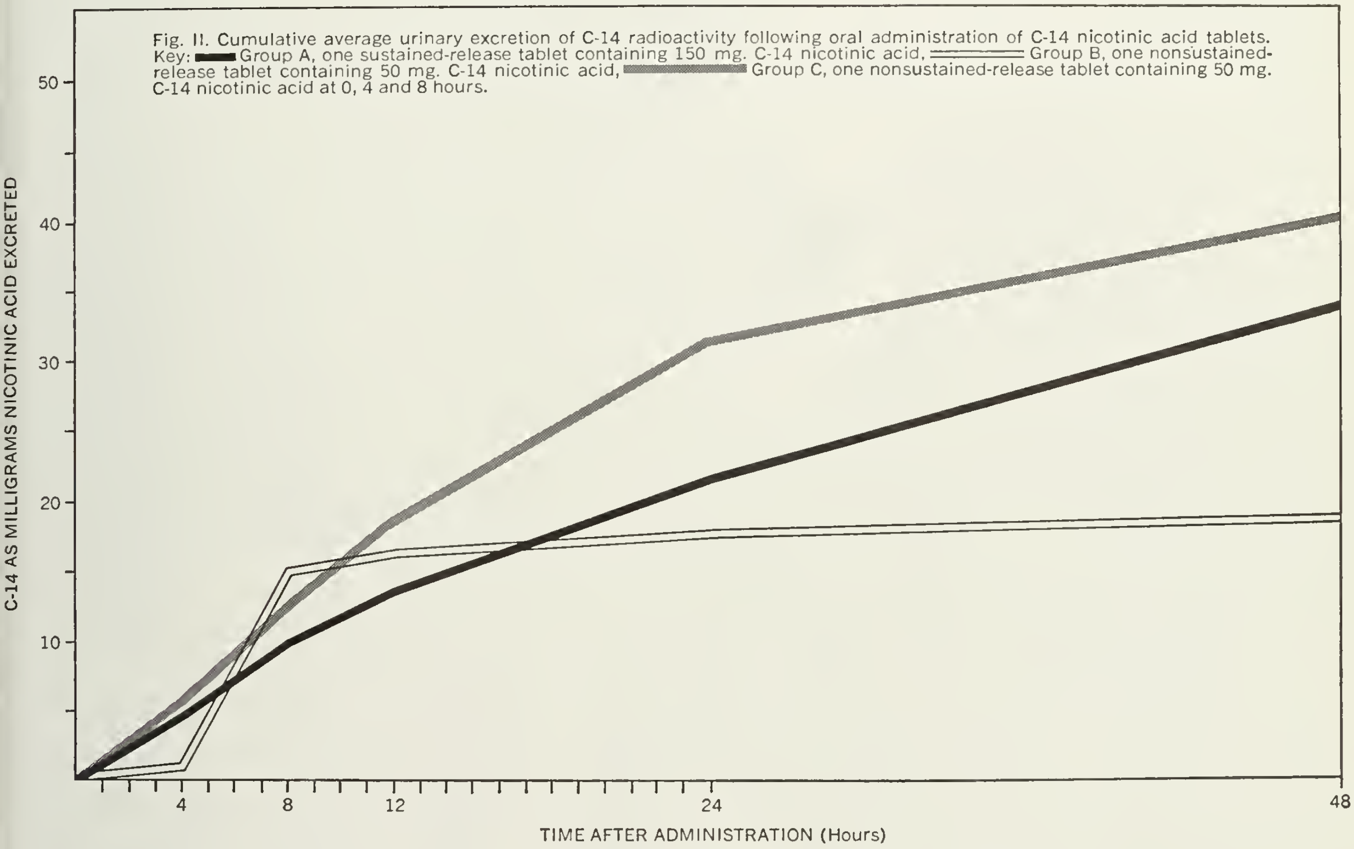
Fig. II. Cumulative average urinary excretion of C-14 radioactivity following oral administration of C-14 nicotinic acid tablets. Key: ▬ Group A, one sustained-release tablet containing 150 mg. C-14 nicotinic acid, ═ Group B, one nonsustained-release tablet containing 50 mg. C-14 nicotinic acid, ▒ Group C, one nonsustained-release tablet containing 50 mg. C-14 nicotinic acid at 0, 4 and 8 hours.
C-14 AS MILLIGRAMS NICOTINIC ACID EXCRETED
50
40
30
20
10
4
8
12
24
48
TIME AFTER ADMINISTRATION (Hours)

less confused and moody. Personal care, memory, emotional stability, social attention improve. Fatigue, apathy and irritability are reduced.

A prescription for 100 tablets of Geroniazol TT will permit your patients to enjoy the benefits of time-prolonged nicotinic acid/pentylenetetrazol therapy, at an economical price. Dosage is only one tablet every 12 hours.

Contraindications: There are no known contraindications.

Precautions: Exercise caution when treating patients with a low convulsive threshold.

Side Effects: Side effects are rarely encountered, however due to the vasodilatation effect of nicotinic acid, transitory mild nausea, flushing, tingling and pruritus are possible.

Dosage: One tablet every 12 hours.

Supplied: Prescribe bottles of 100 tablets, to take advantage of recent price reduction.

References: 1. Report by Nuclear Science & Engineering Corp., Pittsburgh, Pa., in files of Philips Roxane Laboratories. 2. Connolly, R.: W. Virginia Med. J. *56*:263 (Aug.) 1960. 3. Curran, T. R., and Phelps, D. K.: Am. Pract. & Digest Treat. *11*:617 (July) 1960.

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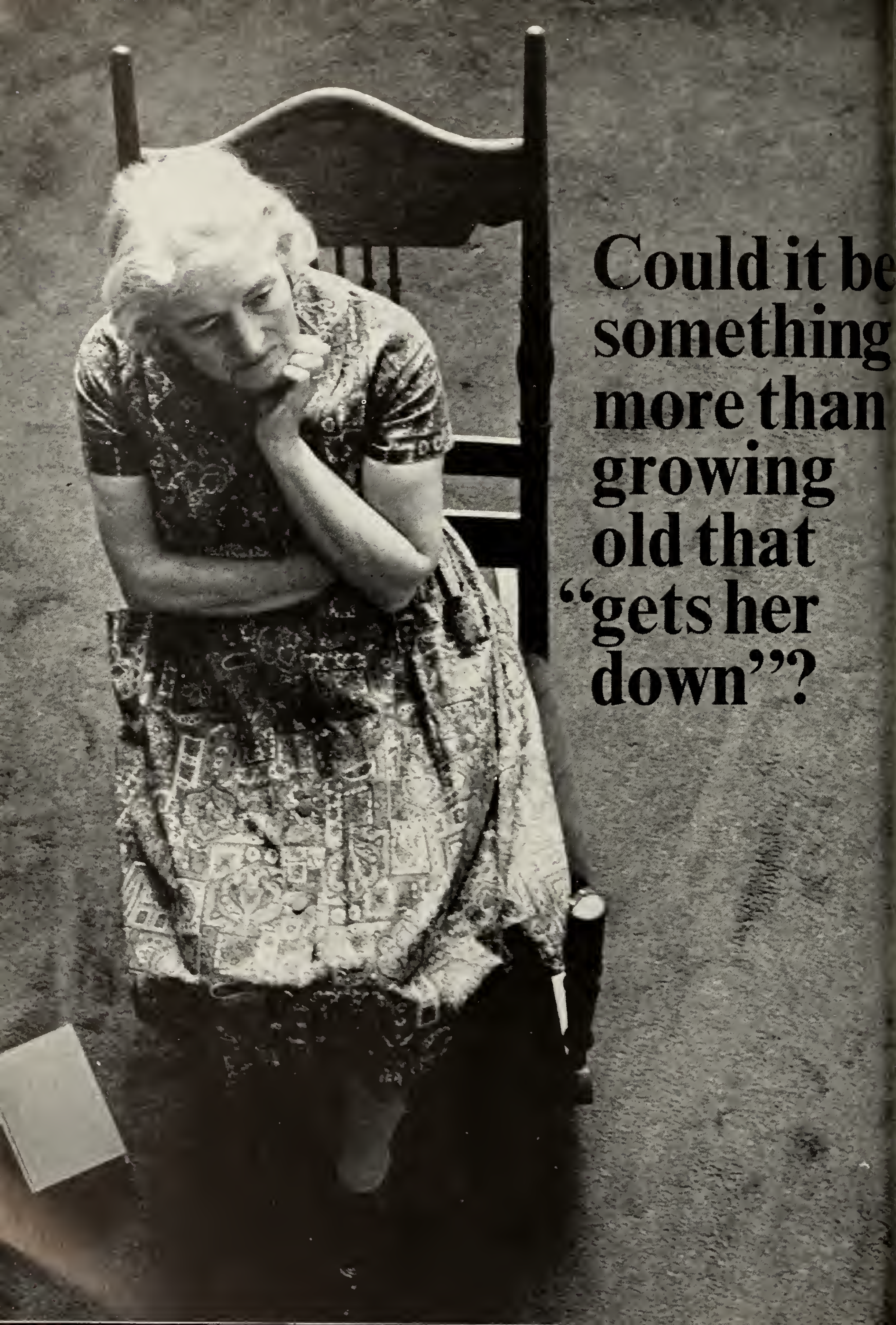

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Adequate dosage is important: Prescribe Alertonic—one tablespoonful t.i.d., 30 minutes before meals ...tastes best chilled.

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*Multiple of adult Minimum Daily Requirement supplied.
†The need for these substances in human nutrition has not been established.

Indications: 1. Functional fatigue such as that often associated with: a depressing experience or stressful time of life; advancing years; convalescence; limited activity or confinement. 2. Poor appetite and vitamin-mineral deficiency as they occur in: patients having faulty eating habits; geriatric patients who are losing interest in food; patients convalescing from debilitating illness or surgery.

Contraindications: As with other drugs with CNS stimulating action, Alertonic is contraindicated in hyperactive, agitated or severely anxious patients and in chorea or obsessive compulsive states.

Side effects: Reports of overstimulation have been rare. Patients who are known to be unduly sensitive to the effects of stimulant drugs should be observed carefully in the initial stages of treatment.

Dosage: Adults, 1 tablespoonful; children (over 15 years old), 1 to 2 teaspoonfuls; children (4 to 15 years old), 1 teaspoonful. To be taken three times daily 30 minutes before meals.

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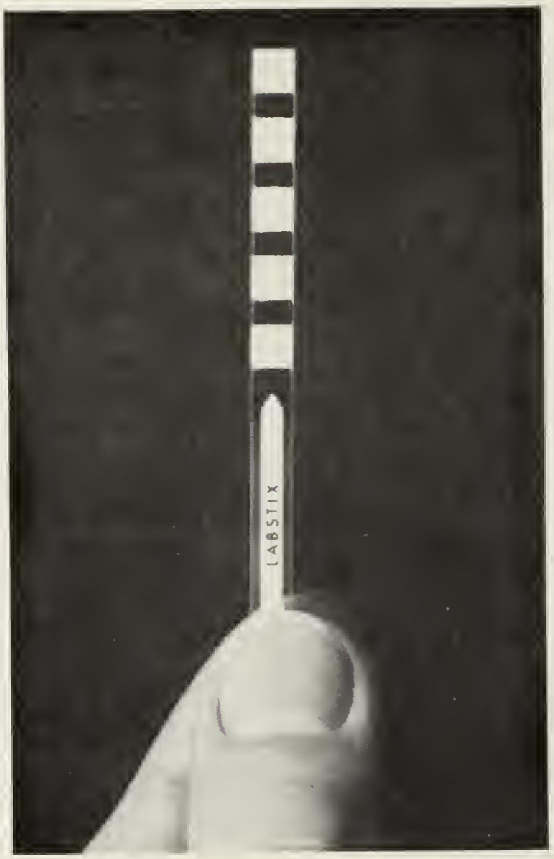

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*Blood; ketones; glucose; protein, and pH.

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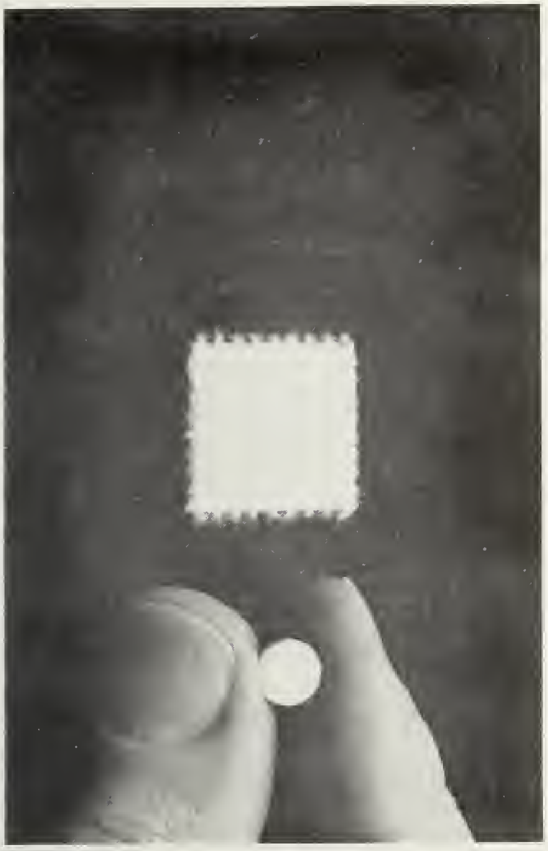

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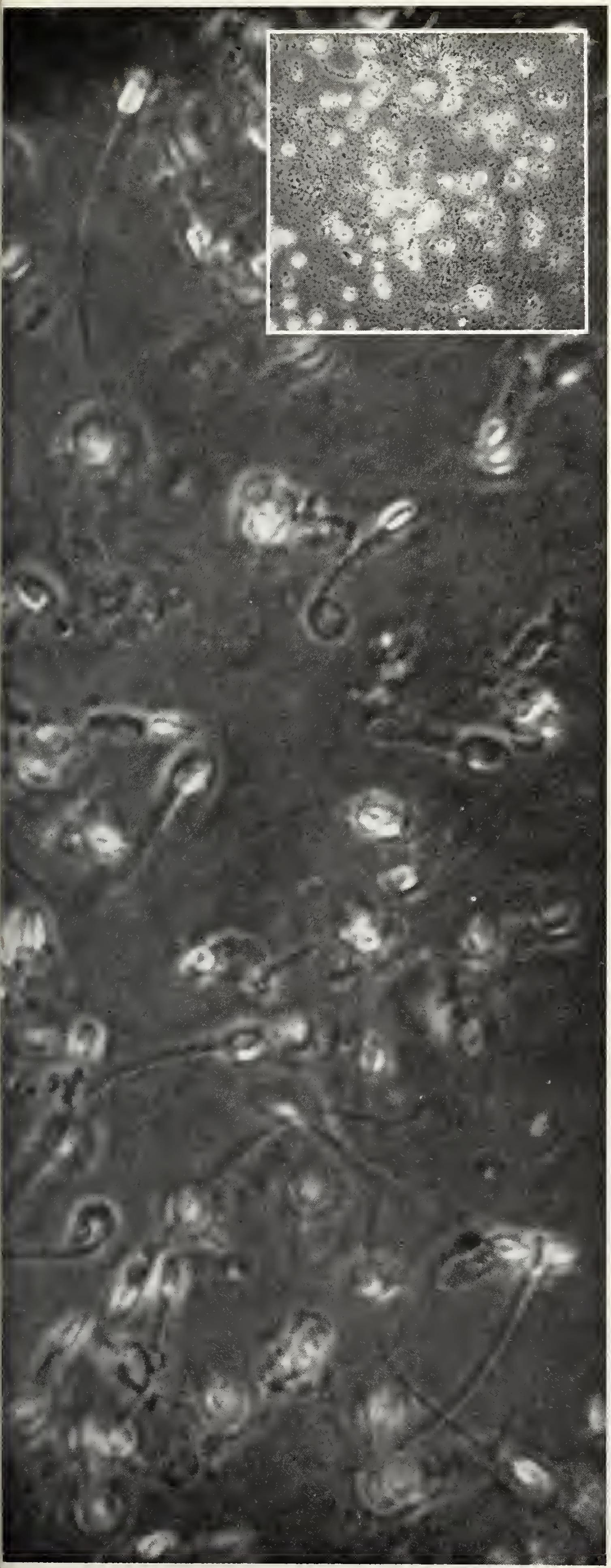


New view of an oral contraceptive at work

Although suppression of ovulation remains the primary mode of action of oral contraceptives, newer knowledge indicates that products like Norinyl-1 — which provide the combined action of both low-dosage progestogen and estrogen for the full treatment cycle — offer multiple contraceptive action that helps explain their unexcelled record of effectiveness. This report explores the secondary protective mechanisms against unwanted pregnancy offered by combined hormonal administration and the importance of the progestational agent in making such multiple contraceptive action possible.

Accumulating evidence has indicated that sparse, highly viscous cervical mucus has an adverse effect on the motility and survival of spermatozoa.

The estrogen-opposing progestational ingredient of Norinyl-1 (norethindrone 1 mg. with mestranol 0.05 mg.) reverses the usual mid-cycle picture of a thin, watery cervical mucus. The result — a built-in barrier that inhibits sperm from reaching the ovum should one be released. The inset in the adjoining photograph shows immobile spermatozoa as they appear in cervical mucus taken from a patient treated with Norinyl-1.

See last page for contraindications, precautions, side effects and dosage.

How the estrogen-opposing action of Norinyl-1 creates a hostile cervical mucus

Normally estrogen activity during the fertile midcycle stimulates the production of cervical mucus. The mucus at this time is profuse and watery—allowing maximum sperm motility and promoting penetration.

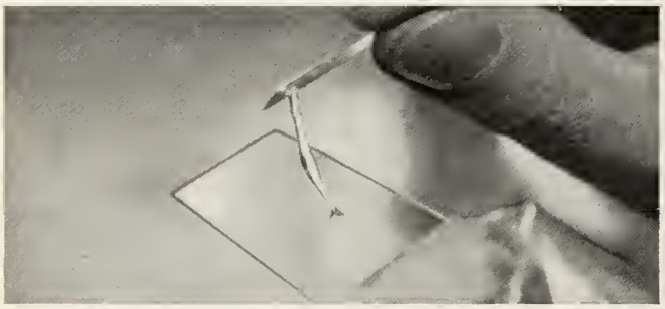
But what happens when Norinyl-1 is administered? Its potent progestogen, norethindrone, opposes estrogen stimulation of cervical mucus. Consequently, the amount of mucus decreases and its viscosity increases. This results in a sparse but thick mucus barrier that diminishes the vitality of the sperm and impairs its powers of penetration.

How hostile cervical mucus supports contraceptive action

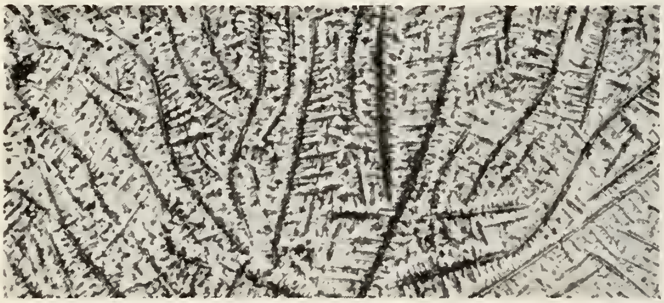
The importance of these observations to the effectiveness of Norinyl-1 has been noted in a report on 89 patients taking this medication.* In all instances, cervical mucus obtained from cycle day 5 to cycle day 29 appeared scant and thick and exhibited little or no Spinnbarkeit. In the opinion of this investigator, the effect on cervical mucus may be sufficient to prevent conception.

*Symposium on Low-Dosage Oral Contraception, Palo Alto, Calif., July 15, 1965.

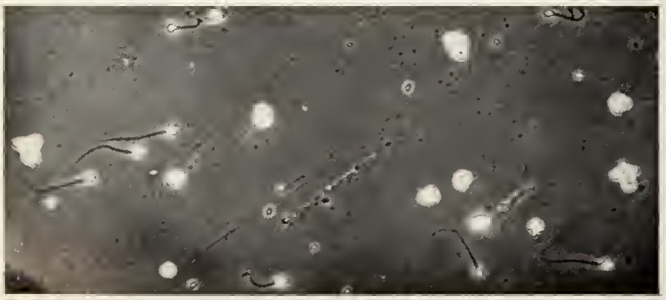
Normal cervical mucus at midcycle in untreated patient permits sperm motility... promotes sperm penetration.



Cervical mucus is thin and watery with a stretchability (Spinnbarkeit) of 15 to 20 cm.

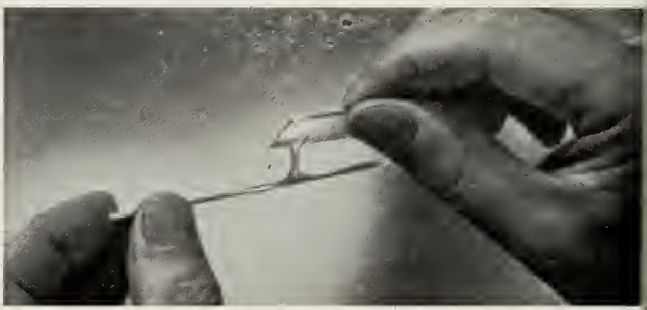


Thin, watery mucus crystallizes into this well-defined, fernlike pattern within a minute.

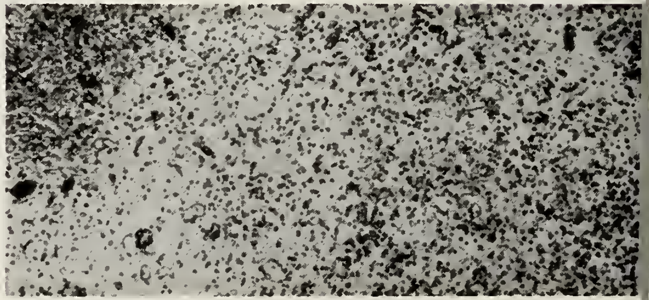


Spermatozoa appear healthy, are active and freemoving.

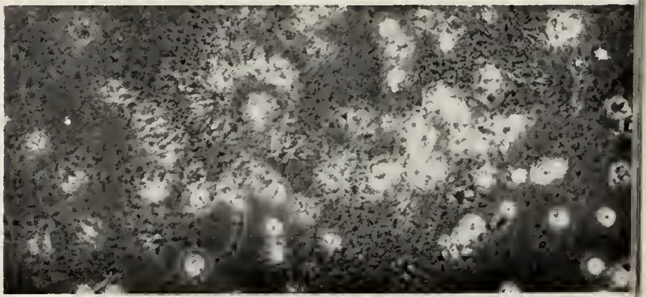
Hostile cervical mucus at midcycle produced by Norinyl-1 impairs sperm vitality... inhibits penetration.



Cervical mucus is scanty, thick and viscous. Spinnbarkeit is 1 cm. or less.



In thick, hostile cervical mucus the fern pattern is poorly defined or absent.

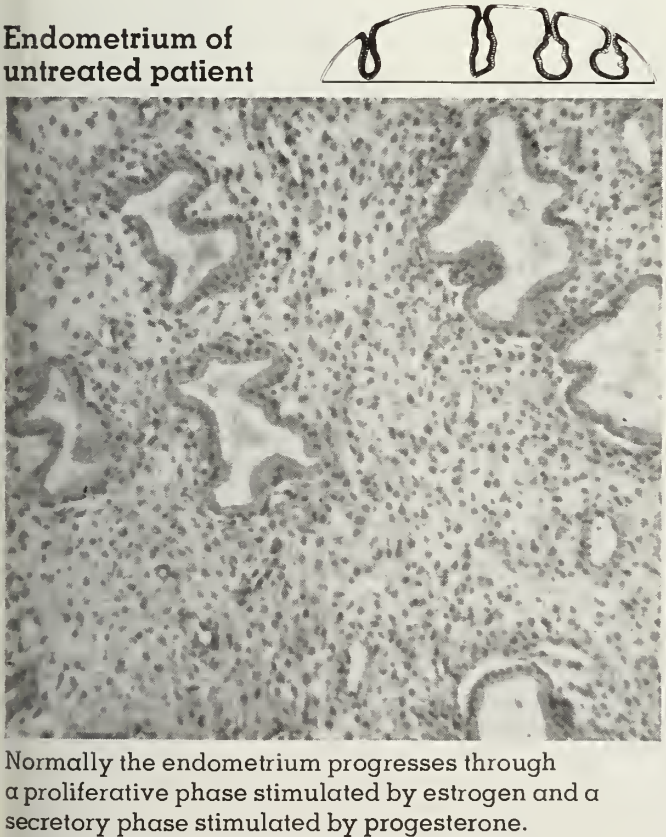


Immobile spermatozoa as they appear in cervical mucus taken from a patient treated with Norinyl-1.

An endometrium unreceptive to nidation– another supporting contraceptive action of Norinyl-1

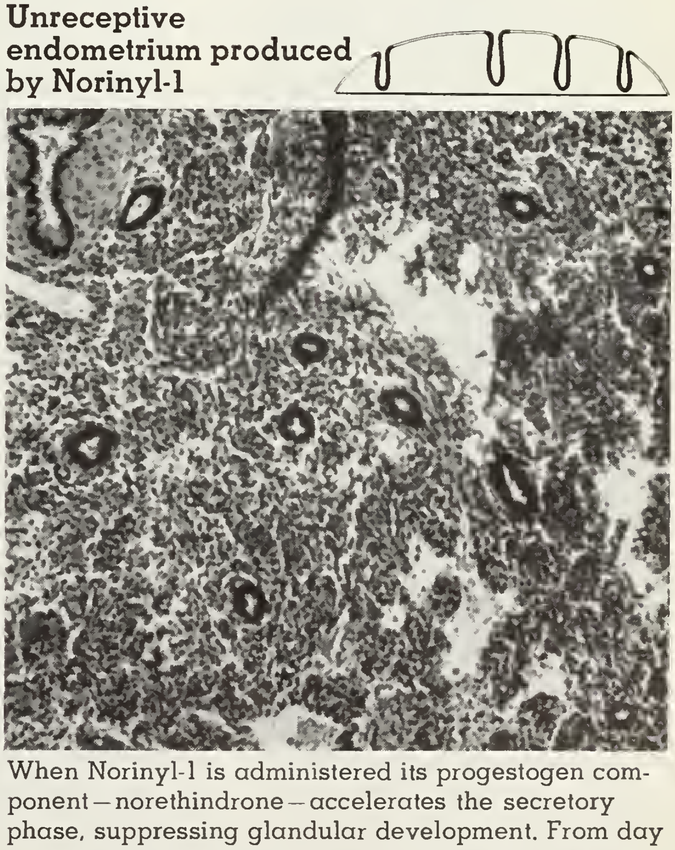
Let us suppose that an ovum is released—as occurs in an occasional, rare case—and somehow a sperm succeeds in penetrating the cervical mucus barrier? Should this come about, one additional action of Norinyl-1 may protect the patient from unwanted pregnancy—progestogen intake makes endometrial tissue unreceptive to implantation.

Endometrium of untreated patient



Normally the endometrium progresses through a proliferative phase stimulated by estrogen and a secretory phase stimulated by progesterone. During the secretory phase the endometrium is receptive to the fertilized ovum.

Unreceptive endometrium produced by Norinyl-1



When Norinyl-1 is administered its progestogen component—norethindrone—accelerates the secretory phase, suppressing glandular development. From day 11 on, secretory action is no longer present. The result is that during the latter half of the cycle the endometrium becomes unreceptive to egg implantation.

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See last page for contraindications, precautions, side effects and dosage.

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Norethindrone was first reported for use as a progestational agent in human beings in 1955. Norethindrone 2 mg. with mestranol 0.1 mg., as an oral contraceptive, is currently in use by over 2,000,000 women. Clinical experience now establishes that Norinyl-1 also amply meets the criteria of reliability and safety.*

*Symposium on Low-Dosage Oral Contraception, Palo Alto, Calif., July 15, 1965.

PRESCRIBING INFORMATION

Contraindications: 1. Patients with thrombophlebitis or with a history of thrombophlebitis or pulmonary embolism. 2. Liver dysfunction or disease. 3. Patients with known or suspected carcinoma of the breast or genital organs. 4. Undiagnosed vaginal bleeding.

Warnings: 1. Discontinue medication pending examination if there is sudden partial or complete loss of vision or if there is a sudden onset of proptosis, diplopia, or migraine. If examination reveals papilledema or retinal vascular lesions, medication should be withdrawn. 2. Since the safety of Norinyl-1 in pregnancy has not been demonstrated, it is recommended that for any patient who has missed two consecutive periods, pregnancy should be ruled out before continuing the contraceptive regimen. If the patient has not adhered to the prescribed schedule, the possibility of pregnancy should be considered at the time of the first missed period. 3. Detectable amounts of the active ingredients in oral contraceptives have been identified in the milk of mothers receiving these drugs. The significance of this dose to the infant has not been determined.

Precautions: 1. The pretreatment physical examination should include special reference to breast and pelvic organs, as well as a Papanicolaou smear. 2. Endocrine and possibly liver function tests may be affected by treatment with Norinyl-1. Therefore, if such tests are abnormal in a patient taking Norinyl-1, it is recommended that they be repeated after the drug has been withdrawn for 2 months. 3. Under the influence of estrogen-progestogen preparations, preexisting uterine fibroids may increase in size. 4. Because these agents may cause some degree of fluid retention, conditions that may be influenced by this factor, such as epilepsy, migraine, asthma, cardiac, or renal dysfunction, require careful observation. 5. Although a cause and effect relationship has not been established, Norinyl-1 should be used with caution in patients with a history of cerebrovascular accident. 6. In relation to breakthrough bleeding, as in all cases of irregular bleeding per vaginam, nonfunctional causes should be borne in mind. In cases of undiagnosed vaginal bleeding, adequate diagnostic measures are indicated. 7. Patients with a history of psychic depression should be carefully observed and the drug discontinued if the depression recurs to a serious degree. 8. Any possible influence of prolonged Norinyl-1 therapy on pituitary, ovarian, adrenal, hepatic or uterine function awaits further study. 9. A decrease in glucose tolerance has been observed in a small percentage of patients on oral contraceptives. The mechanism of this decrease is obscure. For this reason, diabetic patients should be carefully observed while receiving Norinyl-1 therapy. 10. Because of the occasional occurrence of thrombophlebitis and pulmonary embolism in patients taking oral contraceptives, the physician should be alert to the earliest manifestations of the disease. A cause and effect relationship has not been demonstrated. 11. Because of the effects of estrogens on epiphyseal closure, Norinyl-1 should be used judiciously in young patients in whom bone growth is not complete. 12. The age of the patient constitutes no absolute limiting factor, although treatment with Norinyl-1 may mask the onset of the climacteric. 13. The pathologist should be advised of Norinyl-1 therapy when relevant specimens are submitted.

Side Effects: The following adverse reactions have been observed with varying incidence in patients receiving oral contraceptives: nausea, vomiting, gastrointestinal symptoms, breakthrough bleeding, spotting, change in menstrual flow, amenorrhea, edema, chloasma, breast changes (tenderness, enlargement and secretion), loss of scalp hair, change in weight (increase or decrease), changes in cervical erosion and cervical secretions, suppression of lactation when given immediately postpartum, cholestatic jaundice, erythema multiforme, erythema nodosum, hemorrhagic eruption, migraine, rash (allergic), itching, rise in blood pressure in susceptible individuals, mental depression.

The following occurrences have been observed in users of oral contraceptives. A cause and effect relationship has not been established: thrombophlebitis, pulmonary embolism, neuroocular lesions.

The following laboratory results may be altered by the use of oral contraceptives: increased bromsulphalein retention and other hepatic function tests, coagulation tests (increase in prothrombin, factors VII, VIII, IX and X), thyroid function (increase in PBI and butanol extractable protein-bound iodine and decrease in T^3 values), metapyrone test, pregnanediol determination.

Other side effects reported to have occurred in association with use of this drug are dizziness, hirsutism, pains in legs, back, chest and abdomen, dysuria, drowsiness, vaginal discharge, libido increased and decreased, eruptions, hypermenorrhea, hypomenorrhea, increased appetite, G.U. infections, varicose veins, abdominal fullness, acne, headache, nervousness, allergies, blurred vision, pain in eyes, and itching in eyes. *For complete clinical data, see package insert.*

Dosage and Administration: 1. One tablet of Norinyl-1 is administered orally for 20 days beginning on day 5 of the menstrual cycle. (Count day 1 of the cycle as the first day of menstrual bleeding.) Repeat this dosage schedule for each cycle. 2. If no menstrual period occurs after a cycle of treatment (20 tablets) in which patient adhered to the schedule, the patient must be instructed to resume taking the Norinyl-1 tablets 7 days after the previous 20-day course was completed. For example, if the last pill of a previous cycle had been taken on a Sunday, then a new cycle of treatment should begin on the following Sunday. 3. In the postpartum woman, it is recommended that the first cycle of treatment should begin on day 5 of the first menstrual cycle. However, Norinyl-1 should not be administered during lactation.

Availability: Norinyl-1 (norethindrone 1 mg. with mestranol 0.05 mg.)—Dispensers of 20 and 60 and bottles of 250 tablets.

norethindrone — an original steroid from

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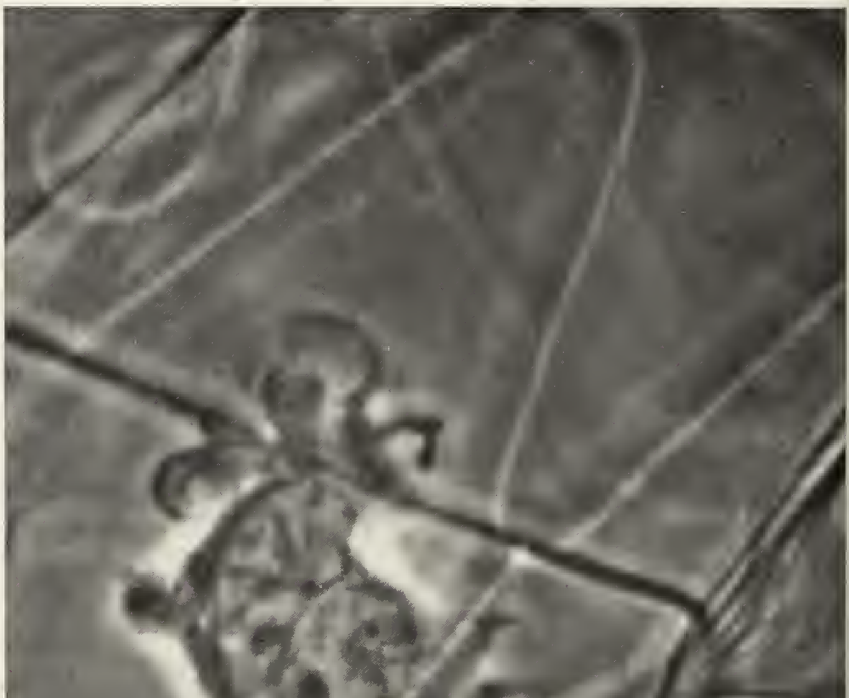
LABORATORIES INC., PALO ALTO, CALIF

INFLAMMATION:
A cellular fight for life

A SYNTEX REPORT based on recently developed hypotheses about topical corticosteroids, including the cellular theories of inflammation by Thomas F. Dougherty, Ph.D., University of Utah.

You are looking at a fibroblast fighting for life. This cell—one of the most common found in connective tissue—has literally been poisoned by cytotoxins released from other cells that have ruptured. Soon, if the abnormal activity of this fibroblast does not cease, it, too, will rupture and die—one more casualty in the inflammatory wave of destruction precipitated by injury.

Until a short time ago no one had ever witnessed such a scene at the cellular level. Now, through advanced cinemicrographic techniques, it is possible to view and photograph the inflammatory process as produced experimentally in living animal tissue. This method permits new insight into the mechanism of inflammation and the role of corticosteroids in therapeutic management. Equally important, these techniques shed new light on factors that may make one corticosteroid more effective than another—factors that can be correlated with other chemical, biologic, and clinical parameters.

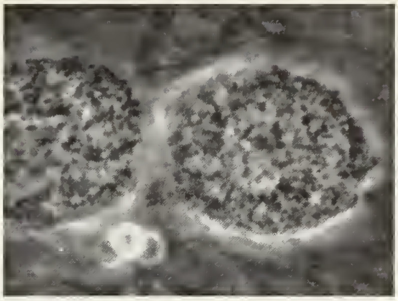


Visual evidence of how corticosteroids influence the inflammatory reaction

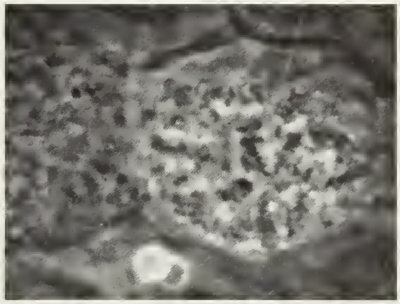
Working with phase-contrast cinemicrography on living animal tissue, Doctors Thomas F. Dougherty and David Berliner of the University of Utah College of Medicine have actually filmed cellular events that occur during the inflammatory reaction. This remarkable study* and additional work by these investigators, as well as by others, have established a new theoretical biologic basis for the antiinflammatory effect of the corticosteroids. (It must be noted that other theories, such as the lysosome or so-called "suicide bag" theory, have been postulated, although it is quite likely that there are more similarities than differences among the various theoretical models.)

The inflammatory wave of destruction

In this investigation an injurious injection of gelatin is used to set off an inflammatory reaction in living mouse tissue. What follows is a wave of destructive cellular activity that comprises the inflammatory response to injury. Mast cells (which contain heparin, serotonin and histamine) take up water, swell and rupture, releasing their contents, which are toxic outside the mast cell wall. These toxins, in turn, cause disintegration of other cells (such as fibroblasts) and the release of additional toxic material. Capillaries, too, take up water and leak unformed blood elements, causing edema. And polymorphonuclears, lymphocytes and perithelial cells invade the inflamed site. As a result of all these changes, the cellular environment reaches a state of turmoil.



Phase-contrast microscopy showing mast cell before injury.

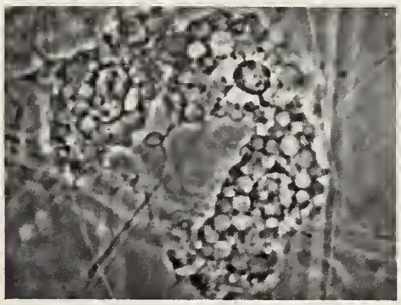


Mast cell (after injury) has broken up and released cytotoxins.

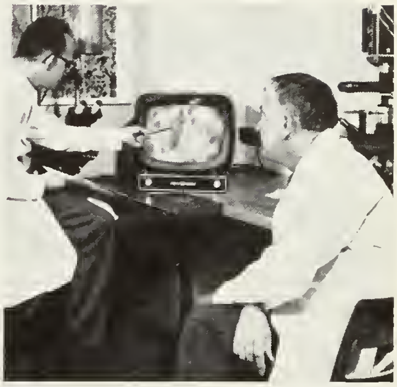
How corticosteroids change the picture

Corticosteroids appear to virtually stop the abnormal cellular activity that constitutes the inflammatory reaction. This permits the body's natural resources to clear up the inflamed area and repair the damaged tissue. This interpretation is supported by the fact that when the injurious gelatin solution is injected simultaneously with a corticosteroid – Synalar (fluocinolone acetonide) – the inflammatory pattern simply does not develop.

Fibroblast in high state of activity, much distorted.



Mast cells showing effects of corticosteroid action: cells are normal in size, shape and activity.



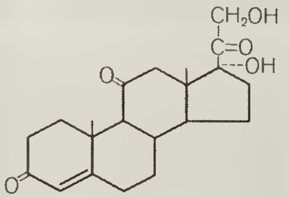
In summarizing his study Doctor Dougherty states: "...we also feel this work may explain why one corticosteroid helps a patient more rapidly and effectively than another. If it does, it is because one corticosteroid is the fastest, most effective inhibitor of the series of inflammatory events at the tissue level."

**A New View of Corticosteroid Action in Inflammatory Dermatoses*, a film based on this study, is now available from your Syntex representative.

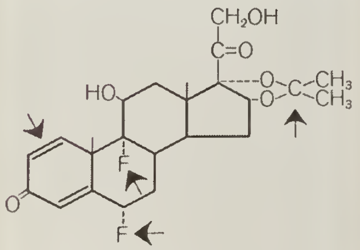
See last page for contraindications, precautions, side effects and dosage.

How advances in chemical design have achieved greater steroid potency

The chemical modification of corticosteroid molecules from the advent of hydrocortisone to the development of Synalar (fluocinolone acetonide) is a prime example of how biochemists can "design" to increase therapeutic activity and minimize undesirable side actions. Below, for example, we see the important changes that were made in reference to the hydrocortisone molecule to produce fluocinolone acetonide, one of the most active of all topical corticosteroids. As a result, a 0.01% preparation of Synalar (fluocinolone acetonide) has been reported to do the work of a 1% hydrocortisone product containing 100 times more cortiscosteroid. And it can often do it more effectively.



Hydrocortisone

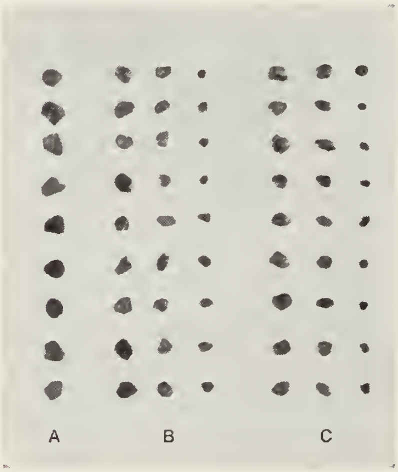


Fluocinolone Acetonide (Synalar)

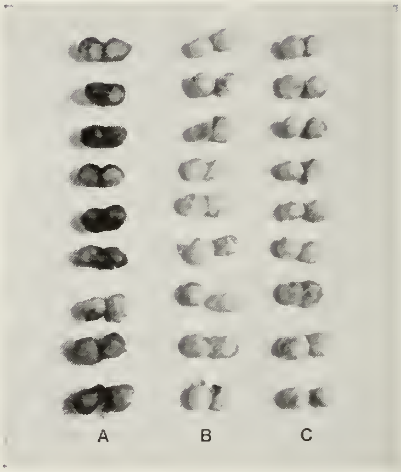
- ☐ *a double bond between carbons 1 and 2*
- ☐ *fluorine substitutions at both the 6-α, and the 9-α positions*
- ☐ *the addition of the acetonide at the 16-α, 17-α positions, thus providing one of the most potent topical corticosteroids available.*

How bioassay tests are used to "predict" therapeutic potential

Biologic assays are another tool used by researchers to help establish the relative activity of corticosteroids. To date no single method of assaying corticosteroid activity has emerged as the ideal "yardstick" for predicting therapeutic potential. Taken together, however, these methods have proved useful. When such tests are run on various corticosteroids, a definite order of corticosteroid activity becomes evident. Compounds with the highest order of activity may be expected to merit clinical trial to establish their high therapeutic potential. When assayed by these methods, fluocinolone acetonide (Synalar) emerges as one of the most active topical corticosteroids, milligram for milligram, available for clinical application today.



The Thymus Involution Assay[1-4] is run on adrenalectomized rats. The sizes of the glands are measured, and the degree of involution caused by the steroid is determined as an indication of its potency. In the above photo, the comparative involution of thymus glands achieved with hydrocortisone and Synalar (fluocinolone acetonide) is shown. Untreated controls (A) show normal size. Group B – injected with 1, 2 and 4 mg. of hydrocortisone – show progressively smaller thymuses as does Group C – injected with fluocinolone acetonide – but with only 1/500th the dose of hydrocortisone.



The Antigranuloma Assay[1-4] also utilizes adrenalectomized rats. Granulomas are induced by subcutaneous implantation of cotton pellets on either side of the thorax. The degree of granuloma inhibition achieved by a steroid reflects its potency. The above photo shows the inhibition of granuloma formation achieved with hydrocortisone and Synalar (fluocinolone acetonide). Untreated controls (A) show large, red granulomas adhering to the pellets. Group B, receiving hydrocortisone and Group C, receiving fluocinolone acetonide, show little, if any, granuloma formation. Fluocinolone acetonide produced the same effect as hydrocortisone with only 1/500th the dose. This assay, as well as the thymus involution assay, measures systemic rather than topical corticosteroid activity. Nevertheless, results by these methods correlate well with other assays and with the milligram potencies of topical steroids in current clinical use.

Worldwide clinical experience confirms the predictable therapeutic potential of Synalar

It is particularly gratifying that the promise of the advanced chemical design and high order of bioassay activity of Synalar (fluocinolone acetonide) has been confirmed by widespread therapeutic application. Indeed, the impressive clinical response rate of Synalar has been documented in no fewer than 232 papers from 22 countries.

Representative Clinical Results with Synalar[*]

Efficacy Documented in over 4,000 Patients

Condition	Number of Publications	Number of Patients	Significant Improvement[†]
Contact Dermatitis	27	750	713
Eczematous Dermatitis	21	472	409
Seborrheic Dermatitis	18	442	426
Atopic Dermatitis	24	460	426
Psoriasis	36	1,699	1,510
Neurodermatitis	18	351	324
Total	144	4,174	3,808

[*] Complete bibliography on request.

[†] Expressed by the authors as excellent, very good, good, complete remission of inflammation, etc.

Prescribing Information

For initiation of therapy: Cream 0.025%, 5 and 15 Gm. tubes, 425 Gm. jars; *for emollient effect:* Ointment 0.025%, 15 Gm. tubes; *for maintenance therapy:* Cream 0.01%, 15 and 45 Gm. tubes, 120 Gm. jars; *for intertriginous or hairy sites:* Solution 0.01%, 20 cc. and 60 cc. plastic squeeze bottles; *for infected inflammatory dermatoses:* Neo-Synalar® Cream (0.025% fluocinolone acetonide, neomycin sulfate, equivalent to 0.35% neomycin base), 5 and 15 Gm. tubes. Contraindications: Tuberculous, fungal, and most viral lesions of the skin, (including herpes simplex, vaccinia, and varicella). Not for ophthalmic use. Contraindicated in individuals with a history of hypersensitivity to any of the components. Precautions: Synalar preparations are virtually nonsensitizing and nonirritating. However, the solution may produce burning or stinging when applied to denuded or fissured areas. In some patients with dry lesions, the solution may increase dryness, scaling or itching. While topical steroids have not been reported to have an adverse effect on pregnancy, the safety of their use on pregnant females has not absolutely been established. Therefore, they should not be used extensively on pregnant patients, in large amounts, or for prolonged periods of time. Prolonged use of any antibiotic may result in overgrowth of nonsusceptible organisms; if this occurs, appropriate therapy should be instituted. When severe local infection or systemic infection exists, the use of systemic antibiotics should be considered, based on susceptibility testing. Side Effects: Side effects are not ordinarily encountered with topically applied corticosteroids. As with all drugs, however, a few patients may react unfavorably to Synalar under certain conditions. The neomycin in Neo-Synalar Cream rarely produces allergic reactions.

References: 1. Lerner, L. J., Bianchi, A., Turkheimer, A. R., Singer, F. M., and Borman, A.: Anti-inflammatory steroids: potency, duration and modification of activities. Ann NY Acad Sci 116:1071 (Aug. 27) 1964. 2. Idem: Comparison of anti-granuloma, thymolytic and glucocorticoid activities of anti-inflammatory steroids. Proc Soc Exp Biol Med 116:385 (June) 1964. 3. Ringler, A.: Activities of adrenocorticosteroids in experimental animals and man, in Dorfman, R. I.: Methods of hormone research, New York, Academic Press, 1964. vol. III. pp. 234-280. 4. Gubersky, V. R.: To be published.

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For inflammatory dermatoses...
by any measure
a topical corticosteroid
of choice

Synalar®
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Milligram for milligram one of the most active topical corticosteroids available

Rapid and predictable in antiinflammatory and antipruritic activity

Results often comparable to those of systemic corticosteroids with fewer hazards

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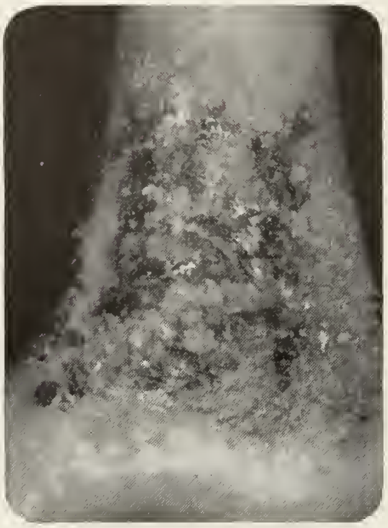
controlled in two weeks



Before treatment

After treatment –
with ARISTOCORT Topical
Ointment 0.1% for two weeks

ARISTOCORT® Triamcinolone Acetonide Topicals have proved exceptionally effective in the control of various forms of eczema: allergic, atopic, nummular, psoriatic, and mycotic.

In most cases responsive to topical ARISTOCORT, the 0.1% concentration is sufficiently potent. The 0.5% concentration provides enhanced topical activity for patients requiring additional potency for proper relief.

Administration and Dosage: Apply sparingly to the affected area 3 or 4 times daily. Some cases of psoriasis may be more effectively treated if the 0.1% Cream or Ointment is applied under an occlusive dressing.

Contraindications: Tuberculosis of the skin, herpes simplex, chicken pox and vaccinia.

Precautions and Side Effects: Do not use in the eyes or in the ear (if drum is perforated). A few individuals react unfavorably under certain conditions. If side effects are encountered, the drug should be discontinued and appropriate measures taken. Use on infected areas should be attended with caution and observation, bearing in mind the potential spreading of infection and the advisability of discontinuing therapy and/or initiating antibacterial measures. Generalized dermatological conditions may require systemic corticosteroid therapy. Steroid therapy, although responsible for remissions of dermatoses, especially of allergic origin cannot be expected to prevent recurrence. The use over extensive body areas, with or without occlusive nonpermeable dressings, may result in systemic absorption. Appropriate precautions should be taken. When occlusive nonpermeable dressings are used, miliaria, folliculitis and pyodermas will sometimes develop. Localized atrophy and striae have been reported with the use of steroids by the occlusive technique. When occlusive nonpermeable dressings are used, the physician should be aware of the hazards of suffocation and flammability. The safety of use on pregnant patients has not been firmly established. Thus, do not use in large amounts or for long periods of time on pregnant patients.

Available in 5 Gm. and 15 Gm. tubes and ½ lb. jars.

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Aristocort® Topical Ointment 0.1% and Cream 0.1%, 0.5%
Triamcinolone Acetonide
Also available in foam form.

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"Livingston...vertigo is my doom!"
Cried Stanley in his doctor's room.

Said the doc, "For your ills
I've got just the pills."

Said Stan,
"Antivert, I presume."

Antivert® tablets/syrup stops vertigo
(meclizine HCl, niacin)

Tablets: (meclizine HCl 12.5 mg. and niacin 50 mg.) Syrup: (each 5 cc. teaspoonful contains meclizine HCl 6.25 mg. and niacin 25 mg.)

Most widely prescribed anti-vertigo agent[1] Complete to moderate relief of symptoms in 9 out of 10 patients[2]

Antivert, the leading anti-vertigo product,[1] combines meclizine HCl, an outstanding drug for treatment of vestibular dysfunction, with niacin, a drug of choice for prompt vasodilation. Prescribe Antivert for your patients with vertigo, Meniere's syndrome and allied disorders.

Precautions and contraindications: Frequent, short-lived reactions include: cutaneous flushing, sensations of warmth, tingling and itching, burning of skin, increased gastrointestinal motility, and sebaceous gland activity. In explaining these reactions to the patient, it is suggested that they be regarded as a desirable physiological sign that the niacin is carrying out its intended function of vasodilation. Because of this vasodilation, severe hypotension and hemorrhage are obvious contraindications to Antivert therapy. Although the incidence of drowsiness and other atropine-like side effects such as dry mouth and blurring of vision is low, the physician should alert the patient to the need for due precautions when engaging in activities where alertness is mandatory. **Use in women of childbearing age:** A review of available animal data reveals that meclizine exerts a teratogenic response in the rat. In one study a dose of 50 mg./kg./day (50 times the maximum recommended human dose) produced cleft palate in 2 of 87 fetuses when administered to the rat at critical times during the first 15 days of gestation. At doses of 125 mg./kg./day, meclizine will produce 100% incidence of cleft palate in the rat. At doses of 25 mg./kg./day, decreased calcification of the vertebrae and relative shortening of the limbs were also produced in the rat, but experts disagree as to whether this is a teratogenic response. While available clinical data are inconclusive, scientific experts are of the opinion that this drug may possess a potential for adverse effects on the human fetus. Consequently, consideration should be given to initial use of a nonphenothiazine agent that is not suspected of having a teratogenic potential. In any case, the dosage and duration of treatment should be kept to a minimum. **Dosage:** One tablet or one to two teaspoonfuls (5-10 cc.) t.i.d. just before meals. Specific requirements for individual patients should be determined by the physician. **Supplied:** Tablets in bottles of 100 and 500. Syrup in pint bottles. RX only.

References: 1. Based on 1966 data from independent physicians' market survey organization. 2. Scal, J. C.: Eye Ear Nose & Throat Month. **38**:738 (Sept.) 1959.

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geriatric supplement

helps keep them 'on the go'

Each capsule contains:

(1) **Vitamins and Minerals**	
Vitamin A (acetate)	2000 U.S.P. units
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Copper (from copper sulfate)	0.33 mg.
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Potassium (from potassium sulfate)	1.66 mg.
Zinc (from zinc sulfate)	0.4 mg.
(2) **Hematopoietic Factors**	
Iron (from ferrous sulfate)	3.40 mg.
Vitamin B_{12} (cobalamin concentrate, N.F., as Stablets®)	1 mcg.
Vitamin C (ascorbic acid, U.S.P.)	50 mg.
(3) **Digestive Enzyme**	
Pancreatic substance*	50 mg.
(4) **Gonadal Hormones**	
Methyltestosterone, N.F.	1.0 mg.
Ethinyl Estradiol, U.S.P.	0.006 mg.
(5) **Amino Acids**	
L-lysine (monohydrochloride)	50 mg.
L-Glutamic acid	30 mg.

*Enzymatically active defatted material obtained from 250 mg. of whole fresh pancreas.

For older adults who require it, daily supplementation with Neobon can help overcome decreases in endogenous gonadal hormone production, as well as deficiencies of iron, vitamins and other nutritional factors. In a single convenient capsule, Neobon provides vitamins, minerals, gonadal hormones, hematopoietic factors, digestive enzymes, and amino acids—all selected for adjunctive therapeutic value in the geriatric syndrome. For example, one of the gonadal hormones in Neobon is ethinyl estradiol. It is more slowly metabolized in the body than natural estrogens or their esters.

Precautions: Contraindicated in patients in whom estrogen or androgen therapy should not be used, as in carcinoma of the breast or prostate.

Dosage: One capsule, t.i.d. with meals, or as directed by physician.

Supplied: Bottles of 60 capsules. Rx only.

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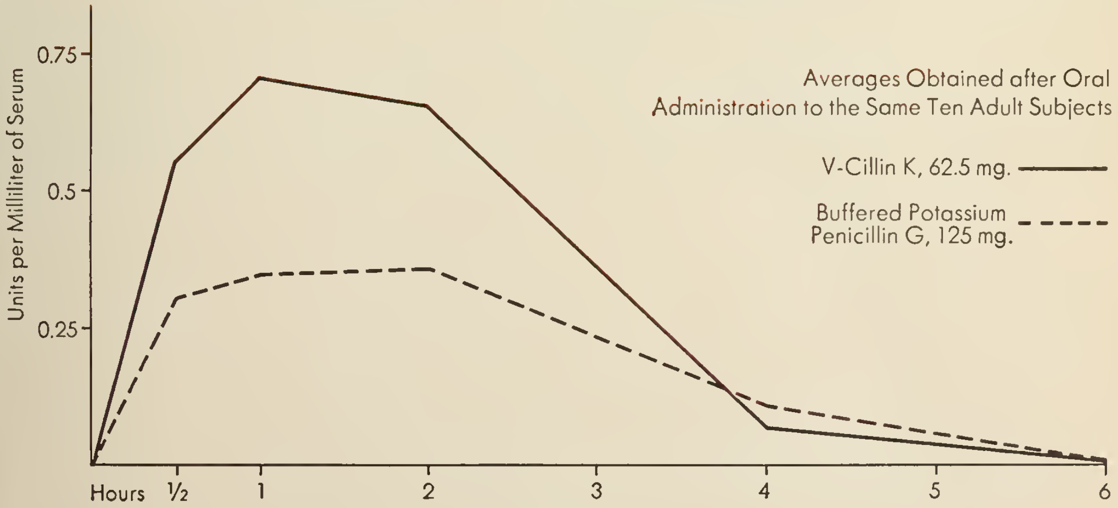
V-Cillin K® provides dependable oral antibacterial activity

because it combines a high degree of in-vitro activity...

Antibiotic	Staph.Aureus (Penicillin-Sensitive) MIC (mcg./ml.) Median	Staph.Aureus (Penicillin-Sensitive) MIC (mcg./ml.) Range	Streptococcus, Group A MIC (mcg./ml.) Median	Streptococcus, Group A MIC (mcg./ml.) Range	Diplococcus Pneumoniae MIC (mcg./ml.) Median	Diplococcus Pneumoniae MIC (mcg./ml.) Range
Penicillin V	0.02	0.02-0.04	0.02	0.003-0.4	0.01	0.005-0.2
Penicillin G	0.02	0.005-1.6	0.005	0.002-0.2	0.02	0.01-0.1
Methicillin	1.6	0.4-6.3	0.2	0.1-0.4	0.2	0.1-1.6
Oxacillin	0.4	0.1-3.1	0.04	0.02-0.4	0.1	0.04-0.8
Cloxacillin	0.2	0.2-0.8	0.1	0.1-0.8	—	—
Nafcillin	0.4	0.2-0.8	0.04	0.02-0.1	0.02	0.02-0.2
Ampicillin	0.2	0.1-0.8	0.02	0.01-0.04	0.02	0.01-0.04

Adapted from Klein, J. O., and Finland, M.. New England J. Med., 269:1019, 1963.

with high blood levels, even in the presence of food



Adapted from Griffith, R. S., and Black, H. R.: Current Ther. Res., 6 253, 1964.

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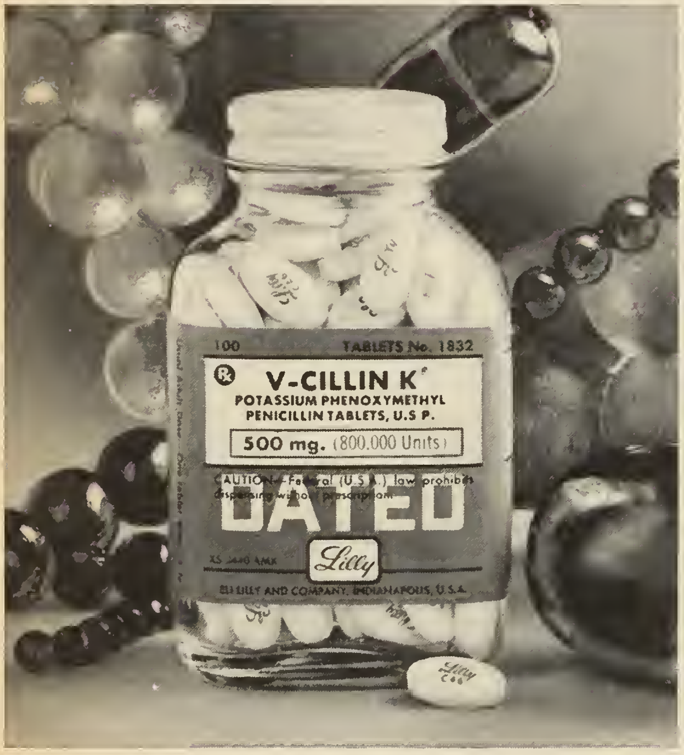
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POTASSIUM PHENOXYMETHYL PENICILLIN TABLETS, U.S.P.
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Description: V-Cillin K is the potassium salt of V-Cillin® (phenoxymethyl penicillin, Lilly). This chemically improved form combines acid stability with immediate solubility and rapid absorption. Higher serum levels are obtained more rapidly with this penicillin than with equal oral doses of penicillin G. The higher serum levels and acid stability of V-Cillin K make it a more dependable penicillin for oral use.

V-Cillin K, Pediatric, is an oral solution of clinically proved V-Cillin K in teaspoon dosage form. When mixed as directed, each 5 cc. (approximately one teaspoonful) will contain 125 mg. (200,000 units) phenoxymethyl penicillin as the potassium salt.

Indications: V-Cillin K has been shown to be effective in the treatment of streptococcus, pneumococcus, and gonococcus infections as well as infections caused by sensitive strains of staphylococci. It may be used for the prophylaxis of streptococcus infections in patients with a history of rheumatic fever and for the prevention of bacterial endocarditis after tonsillectomy and tooth extraction in those patients with a history of rheumatic fever or congenital heart disease.

Contraindication: V-Cillin K should not be administered to a patient with a history of penicillin hypersensitivity.

Warnings: In rare instances, the use of penicillin may cause acute anaphylaxis which may prove fatal unless promptly controlled. This type of reaction appears more frequently in patients with a history of sensitivity reactions to penicillin and in those with bronchial asthma or other allergies. Resuscitative drugs should be readily available for emergency administration. These include epinephrine and pressor drugs (as well as oxygen for inhalation) for relief of immediate allergic manifestations and antihistamines and corticosteroids for delayed effects.

Precautions: V-Cillin K should be used cautiously, if at all, in a patient with a strongly positive history of allergy.

In prolonged therapy with penicillin, and particularly with high parenteral dosage schedules, frequent evaluation of the renal and hematopoietic systems is recommended.

In suspected staphylococcus infections, proper laboratory studies (including sensitivity tests) should be performed.

The use of penicillin may be associated with the overgrowth of pencillin-insensitive organisms. In such cases, its administration should be discontinued, and appropriate measures should be taken.

Adverse Reactions: Although serious allergic reactions are much less common with administration of oral penicillin than with intramuscular forms, manifestations of penicillin allergy may occur.

Penicillin is a substance of low toxicity, but it does possess a significant index of sensitization. The following hypersensitivity reactions associated with the use of penicillin have been reported: skin rashes ranging from maculopapular eruptions to exfoliative dermatitis; urticaria; and reactions resembling serum sickness, including chills, fever, edema, arthralgia, and prostration. Severe and often fatal anaphylaxis has occurred (see Warnings). Hemolytic anemia, leukopenia, thrombocytopenia, and nephropathy are rarely observed side-effects and are usually associated with high parenteral dosage.

Administration and Dosage: For Tablets V-Cillin K and for V-Cillin K, Pediatric, the usual dosage ranges from 125 mg. (200,000 units) three times a day to 500 mg. (800,000 units) every four hours. For infants, the daily dosage may be 50 mg. per Kg. of body weight divided into three doses.

Beta-hemolytic streptococcus infections without associated bacteremia may be treated with 200,000 to 400,0000 units three times a day. Therapy should be continued for a minimum of ten days to prevent development of rheumatic fever and/or other serious complications. Dosage for routine streptococcus prophylaxis in patients with a history of rheumatic fever or congenital heart disease may be 200,000 units once or twice daily. When such patients undergo tonsillectomy, tooth extraction, or other minor surgery, the prophylactic dose should be 500,000 units every six hours given two days prior to surgery and for two days postoperatively. If oral medication is not feasible on the day of surgery, parenteral therapy should be considered. Mild to moderately severe pneumococcus pneumonia has been treated effectively with 250 mg. every six hours.

In staphylococcus infections, 400,000 units or more should be given every six to eight hours in conjunction with indicated surgical procedures.

For gonorrhea in males, 500 mg. (800,000 units) every four hours for three doses may be employed; in females, 500 mg. every four hours for six doses are recommended. Patients with a suspected lesion of syphilis should have a dark-field examination before receiving penicillin and monthly serologic tests for a minimum of three months.

How Supplied: Tablets V-Cillin K, U.S.P., 125 mg. (200,000 units), in bottles of 50 and 100; and 250 mg. (400,0000 units) and 500 mg. (800,000 units), in bottles of 24 and 100.

V-Cillin K, Pediatric, for Oral Solution, 125 mg. (200,0000 units) per 5 cc. of solution, in 40, 80, and 150-cc.-size packages. [011867]

Additional information available to physicians upon request. Eli Lilly and Company, Indianapolis, Indiana 46206.

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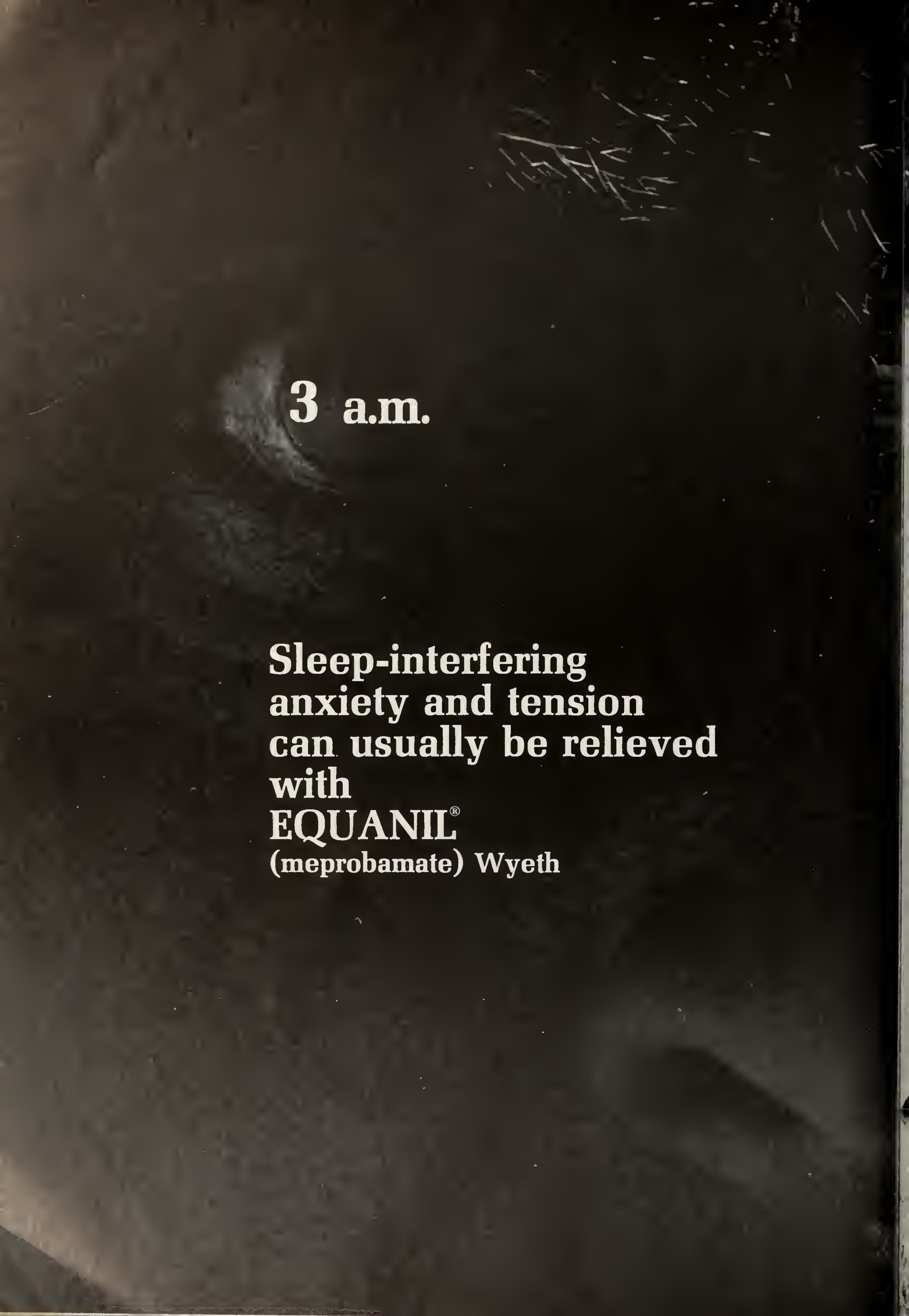
Also available: Ambar #1 Extentabs®—methamphetamine hydrochloride 10 mg., phenobarbital 64.8 mg. (1 gr.) (Warning: may be habit forming).

BRIEF SUMMARY / *Indications:* Ambar suppresses appetite and helps offset emotional reactions to dieting. *Side Effects:* Nervousness or excitement occasionally noted, but usually infrequent at recommended dosages. Slight drowsiness has been reported rarely. *Precautions:* Administer with caution in the presence of cardiovascular disease or hypertension. *Contraindications:* Hypersensitivity to barbiturates or sympathomimetics; patients with advanced renal or hepatic disease. See package insert for further details.



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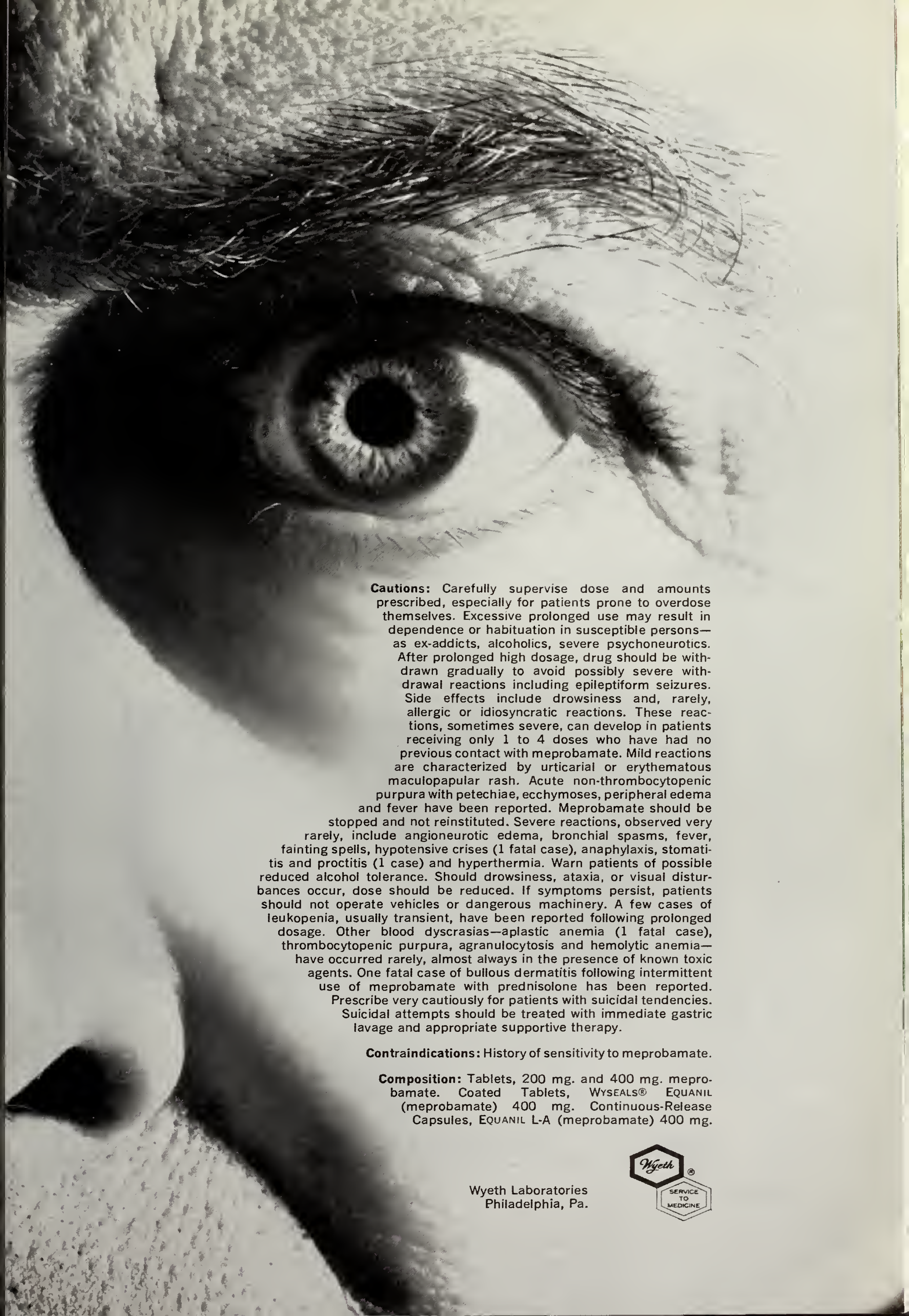

Cautions: Carefully supervise dose and amounts prescribed, especially for patients prone to overdose themselves. Excessive prolonged use may result in dependence or habituation in susceptible persons—as ex-addicts, alcoholics, severe psychoneurotics. After prolonged high dosage, drug should be withdrawn gradually to avoid possibly severe withdrawal reactions including epileptiform seizures. Side effects include drowsiness and, rarely, allergic or idiosyncratic reactions. These reactions, sometimes severe, can develop in patients receiving only 1 to 4 doses who have had no previous contact with meprobamate. Mild reactions are characterized by urticarial or erythematous maculopapular rash. Acute non-thrombocytopenic purpura with petechiae, ecchymoses, peripheral edema and fever have been reported. Meprobamate should be stopped and not reinstituted. Severe reactions, observed very rarely, include angioneurotic edema, bronchial spasms, fever, fainting spells, hypotensive crises (1 fatal case), anaphylaxis, stomatitis and proctitis (1 case) and hyperthermia. Warn patients of possible reduced alcohol tolerance. Should drowsiness, ataxia, or visual disturbances occur, dose should be reduced. If symptoms persist, patients should not operate vehicles or dangerous machinery. A few cases of leukopenia, usually transient, have been reported following prolonged dosage. Other blood dyscrasias—aplastic anemia (1 fatal case), thrombocytopenic purpura, agranulocytosis and hemolytic anemia—have occurred rarely, almost always in the presence of known toxic agents. One fatal case of bullous dermatitis following intermittent use of meprobamate with prednisolone has been reported. Prescribe very cautiously for patients with suicidal tendencies. Suicidal attempts should be treated with immediate gastric lavage and appropriate supportive therapy.

Contraindications: History of sensitivity to meprobamate.

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1. Crunden, A. B., Jr., and Davis, W. A.: Am. J. Obst. & Gynec. *65*:311 (Feb.) 1953.

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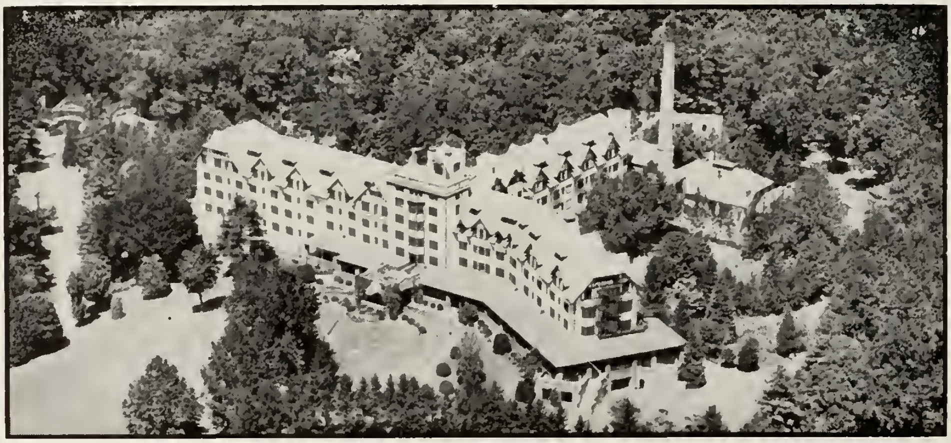

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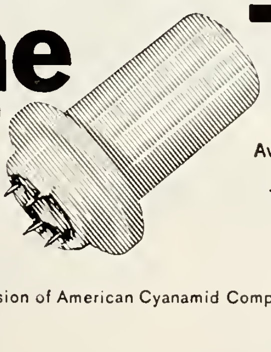

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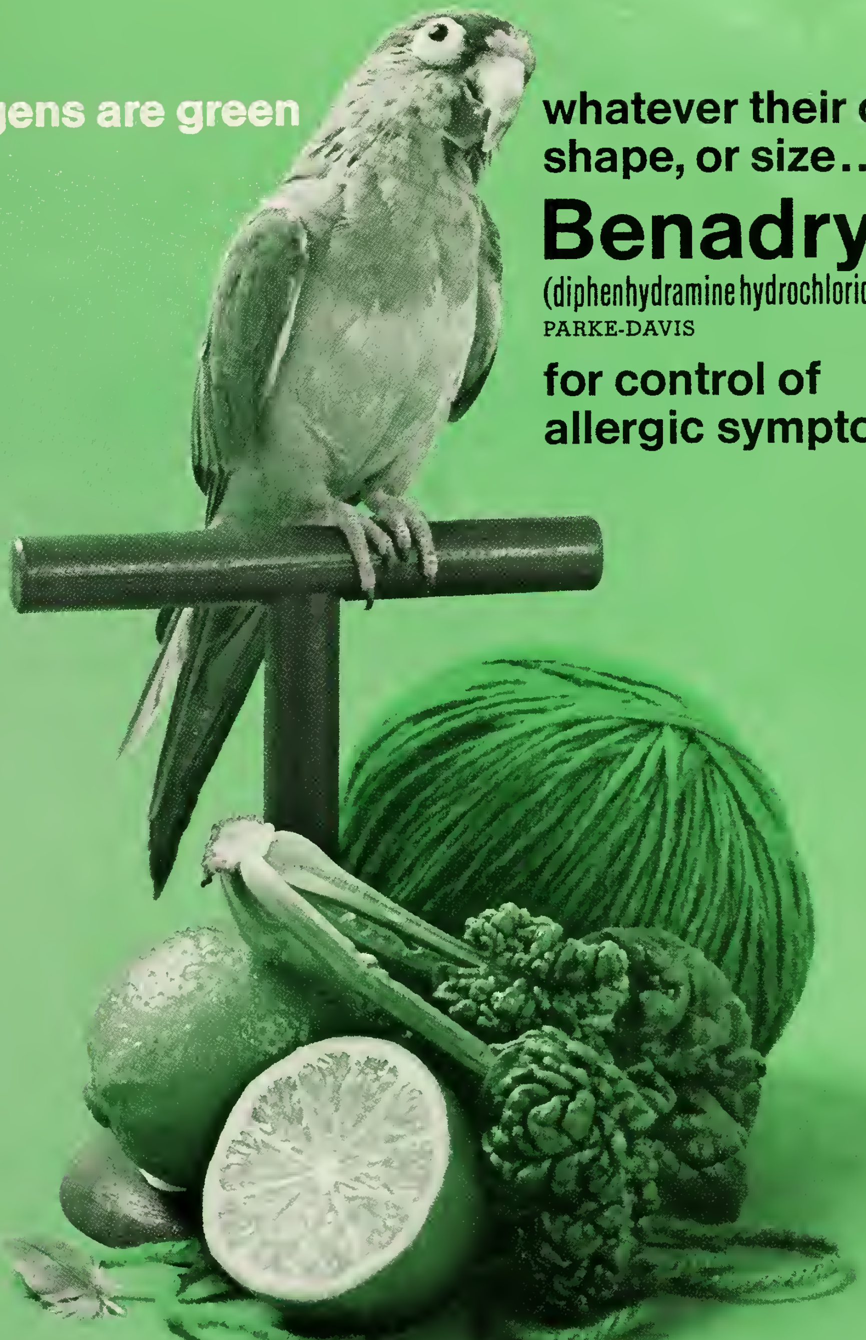
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Precautions: In the elderly and debilitated, and in children over six, limit to smallest effective dosage (initially 10 mg or less per day) to preclude ataxia or oversedation, increasing gradually as needed and tolerated. Not recommended in children under six. Though generally not recommended, if combination therapy with other psychotropics seems indicated, carefully consider individual pharmacologic effects, particularly in use of potentiating drugs such as MAO inhibitors and phenothiazines. Observe usual precautions in presence of impaired renal or hepatic function. Paradoxical reactions (e.g., excitement, stimulation and acute rage) have been reported in psychiatric patients and hyperactive aggressive children. Employ usual precautions in treatment of anxiety states with evidence of impending depression; suicidal tendencies may be present and protective measures necessary. Variable effects on blood coagulation have been reported very rarely in patients receiving the drug and oral anticoagulants; causal relationship has not been established clinically.

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Length—Short articles of about 2,500 words (about 8 typewritten pages, double spaced) are preferred. Longer articles ordinarily will defer to the shorter ones in schedule of publication.

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BRIEF SUMMARY/**Indications:** Ambar suppresses appetite and helps offset emotional reactions to dieting. **Contraindications:** Hypersensitivity to barbiturates or sympathomimetics; patients with advanced renal or hepatic disease. **Precautions:** Administer with caution in the presence of cardiovascular disease or hypertension. **Side Effects:** Nervousness or excitement occasionally noted, but usually infrequent at recommended dosages. Slight drowsiness has been reported rarely. See package insert for further details.

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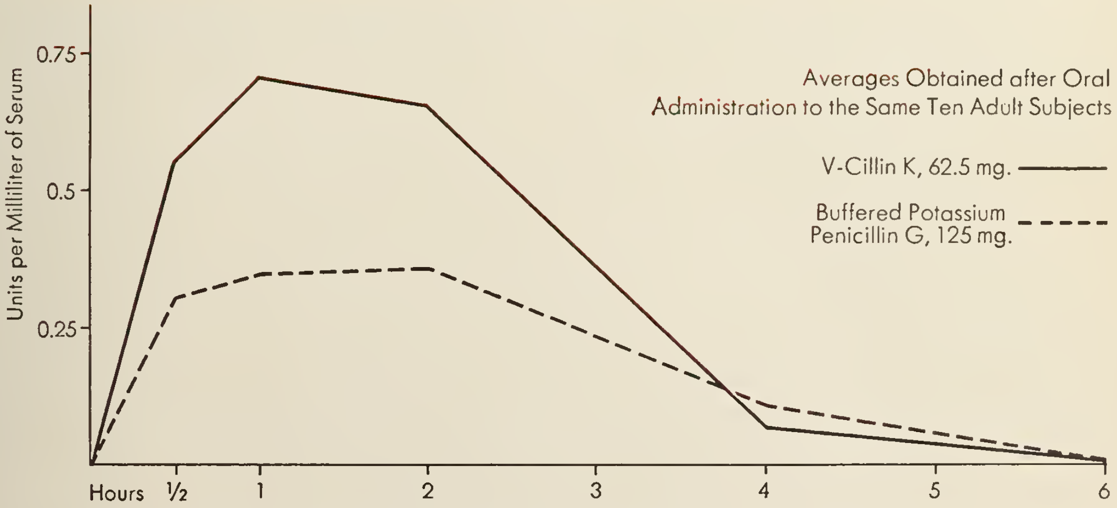
Penicillin G	0.02	0.005-1.6	0.005	0.002-0.2	0.02	0.01-0.1
Methicillin	1.6	0.4-6.3	0.2	0.1-0.4	0.2	0.1-1.6
Oxacillin	0.4	0.1-3.1	0.04	0.02-0.4	0.1	0.04-0.8
Cloxacillin	0.2	0.2-0.8	0.1	0.1-0.8	—	—
Nafcillin	0.4	0.2-0.8	0.04	0.02-0.1	0.02	0.02-0.2
Ampicillin	0.2	0.1-0.8	0.02	0.01-0.04	0.02	0.01-0.04

Adapted from Klein, J. O., and Finland, M.: New England J. Med.,269:1019, 1963.

with high blood levels, even in the presence of food



Adapted from Griffith, R. S., and Block, H. R.: Current Ther. Res., 6 253, 1964.

V-Cillin K® 700636

Potassium Phenoxymethyl Penicillin

(See next page for prescribing information.)

New 500 mg. tablets...a more convenient way to give high doses

Description: V-Cillin K is the potassium salt of V-Cillin® (phenoxymethyl penicillin, Lilly). This chemically improved form combines acid stability with immediate solubility and rapid absorption. Higher serum levels are obtained more rapidly with this penicillin than with equal oral doses of penicillin G. The higher serum levels and acid stability of V-Cillin K make it a more dependable penicillin for oral use.

V-Cillin K, Pediatric, is an oral solution of clinically proved V-Cillin K in teaspoon dosage form. When mixed as directed, each 5 cc. (approximately one teaspoonful) will contain 125 mg. (200,000 units) phenoxymethyl penicillin as the potassium salt.

Indications: V-Cillin K has been shown to be effective in the treatment of streptococcus, pneumococcus, and gonococcus infections as well as infections caused by sensitive strains of staphylococci. It may be used for the prophylaxis of streptococcus infections in patients with a history of rheumatic fever and for the prevention of bacterial endocarditis after tonsillectomy and tooth extraction in those patients with a history of rheumatic fever or congenital heart disease.

Contraindication: V-Cillin K should not be administered to a patient with a history of penicillin hypersensitivity.

Warnings: In rare instances, the use of penicillin may cause acute anaphylaxis which may prove fatal unless promptly controlled. This type of reaction appears more frequently in patients with a history of sensitivity reactions to penicillin and in those with bronchial asthma or other allergies. Resuscitative drugs should be readily available for emergency administration. These include epinephrine and pressor drugs (as well as oxygen for inhalation) for relief of immediate allergic manifestations and antihistamines and corticosteroids for delayed effects.

Precautions: V-Cillin K should be used cautiously, if at all, in a patient with a strongly positive history of allergy.

In prolonged therapy with penicillin, and particularly with high parenteral dosage schedules, frequent evaluation of the renal and hematopoietic systems is recommended.

In suspected staphylococcus infections, proper laboratory studies (including sensitivity tests) should be performed.

The use of penicillin may be associated with the overgrowth of pencillin-insensitive organisms. In such cases, its administration should be discontinued, and appropriate measures should be taken.

Adverse Reactions: Although serious allergic reactions are much less common with administration of oral penicillin than with intramuscular forms, manifestations of penicillin allergy may occur.

Penicillin is a substance of low toxicity, but it does possess a significant index of sensitization. The following hypersensitivity reactions associated with the use of penicillin have been reported: skin rashes ranging from maculopapular eruptions to exfoliative dermatitis; urticaria; and reactions resembling serum sickness, including chills, fever edema, arthralgia, and prostration. Severe and often fatal anaphylaxis has occurred (see Warnings). Hemolytic anemia, leukopenia, thrombocytopenia, and nephropathy are rarely observed side-effects and are usually associated with high parenteral dosage.

Administration and Dosage: For Tablets V-Cillin K and for V-Cillin K, Pediatric, the usual dosage ranges from 125 mg. (200,000 units) three times a day to 500 mg. (800,000 units) every four hours. For infants the daily dosage may be 50 mg. per Kg. of body weight divided into three doses.

Beta-hemolytic streptococcus infections without associated bacteremia may be treated with 200,000 to 400,0000 units three times a day. Therapy should be continued for a minimum of ten days to prevent development of rheumatic fever and/or other serious complicatians Dosage for routine streptococcus prophylaxis in patients with a history of rheumatic fever or congenital heart disease may be 200,000 units once or twice daily. When such patients undergo tonsillectomy, tooth extraction, or other minor surgery, the prophylactic dose should be 500,000 units every six hours given two days prior to surgery and fo two days postoperatively. If oral medication is not feasible on the day of surgery, parenteral therapy should be considered. Mild to moderately severe pneumococcus pneumonia has been treated effectively with 250 mg. every six hours.

In staphylococcus infections, 400,000 units or more should be given every six to eight hours in conjunction with indicated surgical procedures.

For gonorrhea in males, 500 mg. (800,000 units) every four hours fo three doses may be employed; in females, 500 mg. every four hours for six doses are recommended. Refractory infections generally respond to a second treatment three to four days following completion of the first. Treatment of gonorrhea with severe complications should be individualized, with prolonged and intensive treatment. Patients with a suspected lesion of syphilis should have a dark-field examinatian before receiving penicillin and monthly serologic tests for a minimum o three months.

How Supplied: Tablets V-Cillin K, U.S.P., 125 mg. (200,000 units), in bottles of 50 and 100; and 250 mg. (400,0000 units) and 500 mg (800,000 units), in bottles of 24 and 100.

V-Cillin K, Pediatric, for Oral Solution, 125 mg. (200,000 units) pe 5 cc. of solution, in 40, 80, and 150-cc.-size packages. [032067

Additional information available to physicians upon request. Eli Lilly and Company, Indianapolis, Indiana 46206.

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Vacation trip....

Motion sickness?

This time it'll be different. Emetrol taken before the trip begins will usually prevent nausea and vomiting. Emetrol is effective and safe...most helpful where safety is most important. It acts locally—not systemically.

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INCOME PROTECTION PLAN
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OF BENEFITS TO MEMBERS OF THE
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HOME OFFICE, LANCASTER, PENNA.

Wounds, abscess, cellulitis

...and the complications of staph.

Staph reliably controlled with specific therapy

A suitable dosage form for every staph situation

From time of birth, the child is exposed to a whole range of potential staph infections: wounds; secondarily infected dermatoses; primary lesions, such as deep impetigo (ecthyma), boils and felons; and more serious conditions such as osteomyelitis, staph pneumonia and staph meningitis.

Bactericidal

Hardly a staph organism can resist the bactericidal action of Prostaphlin® (sodium oxacillin), as shown by a 34-month *in vitro* study. Of all staph isolates tested, 99.5% were sensitive to oxacillin.[1]

Clinically Proven

There is a high correlation between these *in vitro* findings and clinical results. Of 610 patients treated with Prostaphlin (sodium oxacillin), 89.8% were reported cured or improved, including those with staph infections resistant to penicillin G.[2] And since resistance does not appear to develop *in vivo,* therapy with oxacillin can be extended when necessary.

Outstanding Safety Record

Besides being staph-specific and rapidly absorbed—Prostaphlin (sodium oxacillin) has established an outstanding record of safety during five years of widespread clinical use. Continuous high blood levels of oxacillin have not produced toxic effects on kidney function, assuring a significant margin of safety. However, as with all penicillins, the possibility of allergic response should be considered.

Capsules, Oral Suspension and Injectable

Prostaphlin (sodium oxacillin) is available in three flexible dosage forms to suit the age of the patient and severity of infection—an oral solution for pediatric use, capsules, and multi-dose vials for injection.

PRESCRIBING INFORMATION: For complete information, consult Official Package Circular. *Indications:* Infections caused by Staphylococci, particularly those due to penicillin G-resistant Staphylococci. *Contraindications:* A history of severe allergic reactions to penicillin. *Precautions:* Typical penicillin-allergic reactions may occur. Safety for use in pregnancy and premature infants is not established. Because of limited experience, use cautiously and evaluate organ system function frequently in neonates. Mycotic or bacterial superinfections may occur. Assess renal, hematopoietic and hepatic function intermittently during long-term therapy. *Adverse Reactions:* Skin rashes, pruritus, urticaria, eosinophilia, nausea, vomiting, diarrhea, fever and occasional anaphylaxis. Rare cases of reversible hepatocellular dysfunction have occurred. Moderate SGOT elevations have been noted. Thrombophlebitis has occurred occasionally during intravenous therapy and leukopenia was noted in two cases. *Usual Oral Dosage:* Adults: 500 mg. *q.* 4 or *q.* 6 *h.* Children: 50 mg./Kg./day. *Usual Parenteral Dosage:* Adults: 250-500 mg. *q.* 4 or *q.* 6 *h.* Children: 50 mg./Kg./day. Treat beta-hemolytic streptococcal infections for at least 10 days. Give oral drug 1 to 2 hours before meals. *Supplied:* Capsules—250 and 500 mg. in bottles of 48. Injectable—250 mg., 500 mg., and 1 Gm. dry filled vial for I.M./I.V. use. For Oral Solution—100 ml. bottle, 250 mg./5 ml. when reconstituted.

A.H.F.S. CATEGORY 8:12.16

References: 1. Abstracted from *Antibiotic Sensitivity of Staphylococci Studied from November 1962 through August 1965,* reported by Griffith, L.J., Staphylococcus Reference Laboratory, V.A. Hospital, Batavia, N.Y. 2. Data on file, Bristol Laboratories.

BRISTOL

BRISTOL LABORATORIES/Division of Bristol-Myers Co., Syracuse, N.Y.

Whenever you suspect staph

PROSTAPHLIN®

SODIUM OXACILLIN

There are 26,600* undetected diabetics in South Carolina

Most of these are probably among patients over 40; the overweight; relatives of diabetics, and mothers of large babies. By the time polyphagia, polyuria, polydipsia, pruritus or other overt symptoms of diabetes appear, damage may have been done that could have been minimized. DEXTROSTIX® gives you a reliable blood-glucose estimate in 60 seconds.

Why Wait?

*Based on Statistical Report, U.S. Dept. Commerce, ed. 86, and Fisher, G. F., and Vavra, H. M.: Pub. Health Rep. *80*:961 (Nov.) 1965.

Note: DEXTROSTIX is not meant to replace the more precise analytical laboratory procedures such as needed in glucose tolerance testing.

AMES COMPANY, Division Miles Laboratories, Inc., Elkhart, Indiana 46514 428R67

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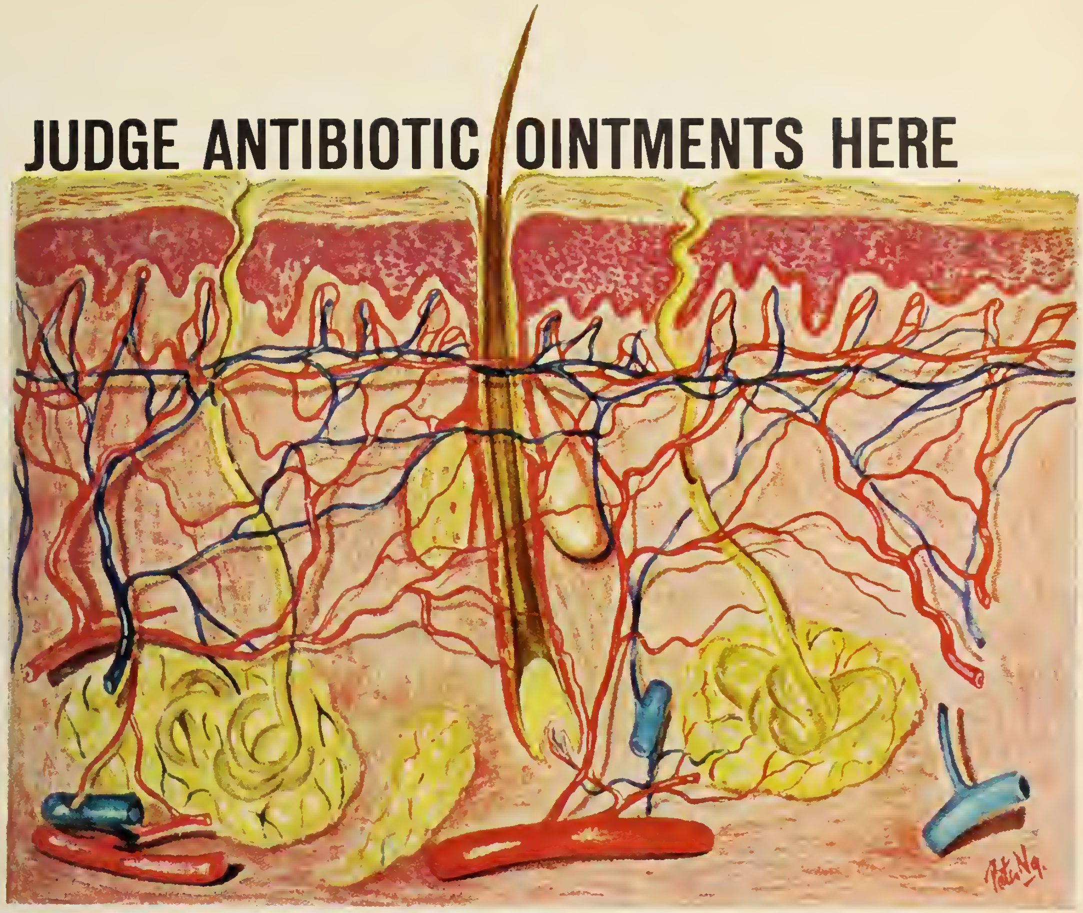

Results on skin are final proof of any topical antibiotic's effectiveness

No in vitro test can duplicate a clinical situation on living skin. 'Neosporin' (polymyxin B—bacitracin—neomycin) Ointment has consistently proven its effectiveness in thousands of cases of bacterial skin infection. The spectra of the three antibiotics overlap in such a way as to provide bactericidal action against most pathogenic bacteria likely to be found topically. Diffusion of the antibiotics from the special petrolatum base is rapid since they are insoluble in the petrolatum, but readily soluble in tissue fluids. The Ointment is bland and nonirritating.

Caution: As with other antibiotic preparations, prolonged use may result in overgrowth of nonsusceptible organisms and/or fungi. Appropriate measures should be taken if this occurs. Articles in the current medical literature indicate an increase in the prevalence of persons allergic to neomycin. The possibility of such a reaction should be borne in mind.

Contraindications: This product is contraindicated in those individuals who have shown hypersensitivity to any of its components.

Supplied: Tubes of 1 oz., ½ oz. with applicator tip, and ⅛ oz. with ophthalmic tip.

Complete literature available on request from Professional Services Dept. PML.

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brand

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OINTMENT

BURROUGHS WELLCOME & CO. (U.S.A.) INC., Tuckahoe, N.Y.

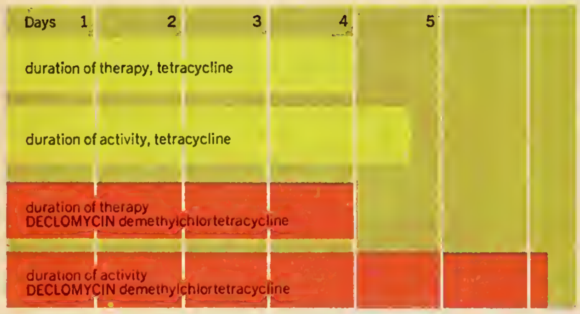
why wonder about a drug

when you know

DECLOMYCIN®

DEMETHYLCHLORTETRACYCLINE

produces 1-2 "extra" days' activity



1-2 "extra" days' activity
after the last dose to protect against relapse

one 300 mg tablet b.i.d.
or
one 150 mg capsule q.i.d.

Effective in a wide range of everyday infections—respiratory, urinary tract and others—in the young and aged—the acutely or chronically ill—when the offending organisms are tetracycline-sensitive.

Contraindication—History of hypersensitivity to demethylchlortetracycline.

Warning—In renal impairment, usual doses may lead to excessive systemic accumulation and liver toxicity. Under such conditions, lower than usual doses are indicated and, if therapy is prolonged, serum level determinations may be advisable. A photodynamic reaction to natural or artificial sunlight has been observed. Small amounts of drug and short exposure may produce an exaggerated sunburn reaction which may range from erythema to severe skin manifestations. In a smaller proportion, photoallergic reactions have been reported. Patients should avoid direct exposure to sunlight and discontinue drug at the first evidence of skin discomfort.

Precautions and Side Effects—Overgrowth of nonsusceptible organisms may occur. Constant observation is essential. If new infections appear, appropriate measures should be taken. Use of demethylchlortetracycline during tooth development (last trimester of pregnancy, neonatal period and early childhood) may cause discoloration of the teeth (yellow-grey-brownish). This effect occurs mostly during long-term use but has also been observed in short treatment courses. In infants, increased intracranial pressure with bulging fontanels has been observed. All signs and symptoms have disappeared rapidly upon cessation of treatment. Side reactions include glossitis, stomatitis, proctitis, nausea, diarrhea, vaginitis and dermatitis. If adverse reaction or idiosyncrasy occurs, discontinue medication and institute appropriate therapy. Anaphylactoid reactions have been reported.

Average Adult Daily Dosage: 150 mg q.i.d. or 300 mg b.i.d. Should be given 1 hour before or 2 hours after meals, since absorption is impaired by the concomitant administration of high calcium content drugs, foods and some dairy products.

Capsules: 150 mg; *Tablets:* film coated, 300 mg, 150 mg, and 75 mg of demethylchlortetracycline HCl.

LEDERLE LABORATORIES, A Division of American Cyanamid Company, Pearl River, New York
419-6—4075

For he's a jolly good fellow

But what does he think?

Many overweight patients can benefit from the appetite control provided by the sustained anorexigenic-tranquilizing action of BAMADEX SEQUELS: anorexigenic action of amphetamine; tranquilizing action of meprobamate; prolonged action through sustained release of active ingredients.

Bamadex® Sequels®

DEXTRO-AMPHETAMINE SULFATE (15 mg.) WITH MEPROBAMATE (300 mg.) SUSTAINED RELEASE CAPSULES

to help establish a new dietary pattern

Contraindications: Dextro-amphetamine sulfate: in hyperexcitability and in agitated prepsychotic states. Previous allergic or idiosyncratic reactions to meprobamate.

Precautions: Use with caution in patients hypersensitive to sympathomimetic compounds, who have coronary or cardiovascular disease, or are severely hypertensive.

Dextro-amphetamine sulfate: Excessive use by unstable individuals may result in psychological dependence.

Meprobamate: Careful supervision of dose and amounts prescribed is advised, especially for patients with known propensity for taking excessive quantities of drugs. Excessive and prolonged use in susceptible persons, e.g. alcoholics, former addicts, and other severe psychoneurotics, has been reported to result in dependence on the drug. Where excessive dosage has continued for weeks or months, reduce dosage gradually. Sudden withdrawal may precipitate recurrence of preexisting symptoms such as anxiety, anorexia, or insomnia; or withdrawal reactions such as vomiting, ataxia, tremors, muscle twitching and, rarely, epileptiform seizures. Should meprobamate cause drowsiness or visual disturbances, reduce dosage and avoid operation of motor vehicles, machinery or other activity requiring alertness. Effects of excessive alcohol consumption may be increased by meprobamate. Appropriate caution is recommended with patients prone to excessive drinking. In patients prone to both petit and grand mal epilepsy meprobamate may precipitate grand mal attacks. Prescribe cautiously and in small quantities to patients with suicidal tendencies.

Side Effects: Overstimulation of the central nervous system, jitteriness and insomnia or drowsiness.

Dextro-amphetamine sulfate: Insomnia, excitability, and increased motor activity are common and ordinarily mild side effects. Confusion, anxiety, aggressiveness, increased libido, and hallucinations have also been observed, especially in mentally ill patients. Rebound fatigue and depression may follow central stimulation. Other effects may include dry mouth, anorexia, nausea, vomiting, diarrhea, and increased cardiovascular reactivity.

Meprobamate: Drowsiness may occur and can be associated with ataxia; the symptom can usually be controlled by decreasing the dose, or by concomitant administration of central stimulants. Allergic or idiosyncratic reactions: maculopapular rash, acute nonthrombocytopenic purpura with petechiae, ecchymoses, peripheral edema and fever, transient leukopenia. A case of fatal bullous dermatitis, following administration of meprobamate and prednisolone, has been reported. Hypersensitivity has produced fever, fainting spells, angioneurotic edema, bronchial spasms, hypotensive crises (1 fatal case), anuria, stomatitis, proctitis (1 case), anaphylaxis, agranulocytosis and thrombocytopenic purpura, and a fatal instance of aplastic anemia, but only when other drugs known to elicit these conditions were given concomitantly. Fast EEG activity, usually after excessive dosage. Impairment of visual accommodation. Massive overdosage may produce drowsiness lethargy, stupor, ataxia, coma, shock, vasomotor and respiratory collapse.

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A Division of American Cyanamid Company,
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now Novestrol™ (ethinyl estradiol U.S.P.)

estrogen replacement therapy

for the menopausal syndrome and female hypogonadism. Novestrol, a pure synthetic estrogen derivative, is related to estradiol which is the primary hormone of the ovarian follicle. It is effective orally and has all the actions of naturally occurring estrogen.

Ethinyl estradiol is the most active estrogen known. In addition to its high potency, Novestrol offers patients the advantages of minimal side effects, low cost, and convenience. Usually only a single daily dose is necessary.

Description: Each green, sugar-coated tablet contains 0.02 mg. of ethinyl estradiol U.S.P., a pure synthetic estrogen derivative, the most active estrogen known.
Indications: Menopausal syndrome and female hypogonadism.
Contraindications: Patients with tumors which estrogen might stimulate.
Precautions: Examine patients for mammary or reproductive system neoplasm. Give with great care, if at all, to patients who have precancerous lesions or family history of cancer.

Prolonged administration or high doses may produce anterior pituitary suppression. Endometrial bleeding can usually be avoided by cyclic administration at lowest effective dose and addition of progesterone during last half of cycle. Endometrial hyperplasia may develop in spite of cyclic therapy.
Side Effects: Occasional gastrointestinal disturbances, headache and vertigo. These usually disappear following proper dosage reduction.
Dosage and Administration: Determine minimum effective dose and maintain only as long as necessary.

Menopausal Syndrome: One or two tablets (0.02 or 0.04 mg.) daily. Omit therapy one week each month. Repeat cyclic therapy until satisfactory response is obtained. Advise patient that vaginal bleeding may occur.

Female Hypogonadism: Two tablets (0.04 mg.) one to three times daily for two weeks followed by progesterone for two weeks. Continue cyclic therapy for 3-6 months; then withdraw therapy to determine if normal cycle will be instituted. Additional cyclic therapy may be required in some patients.

RORER

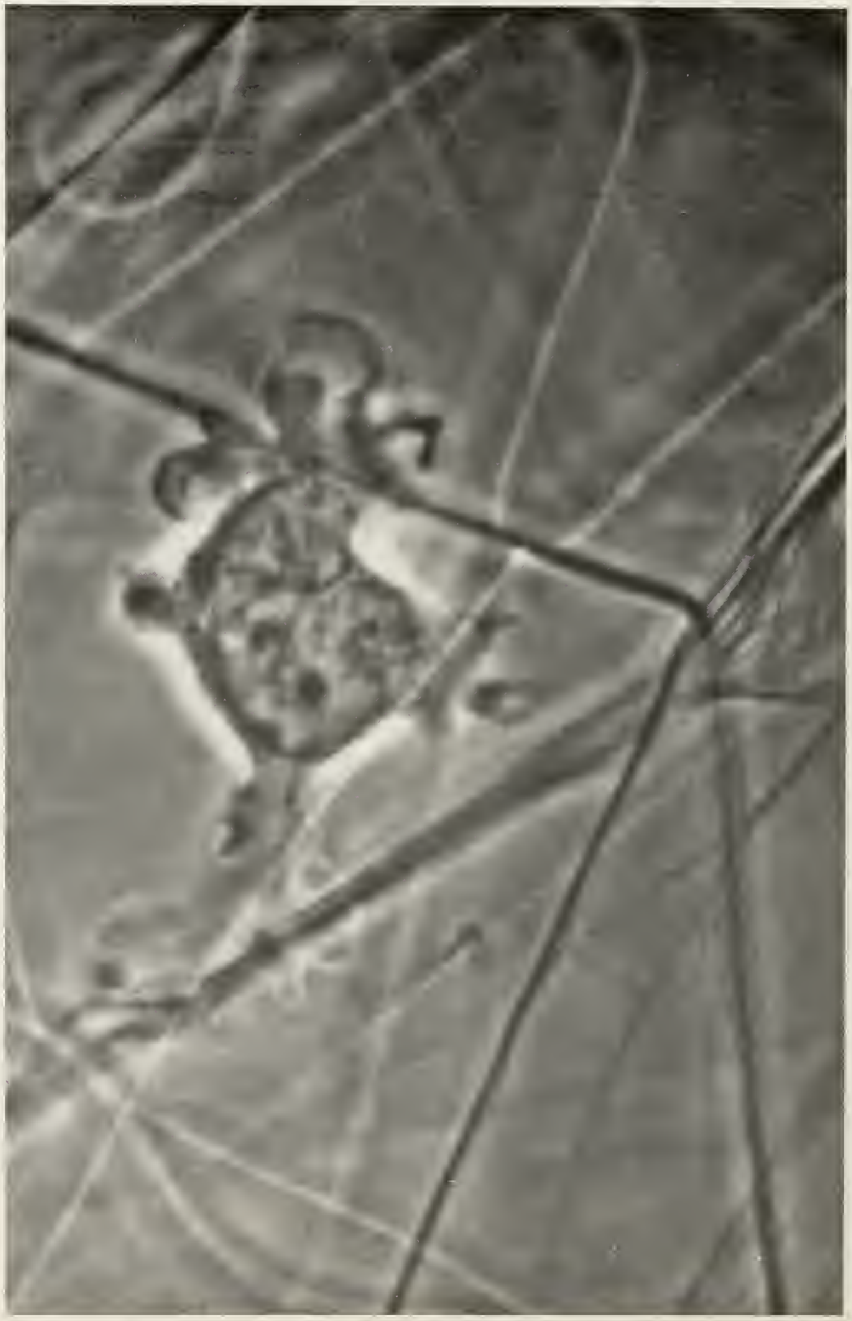
WILLIAM H. RORER, INC. Fort Washington, Pa.

INFLAMMATION:
A cellular fight for life

A SYNTEX REPORT based on recently developed hypotheses about topical corticosteroids, including the cellular theories of inflammation by Thomas F. Dougherty, Ph.D., University of Utah.

You are looking at a fibroblast fighting for life. This cell—one of the most common found in connective tissue—has literally been poisoned by cytotoxins released from other cells that have ruptured. Soon, if the abnormal activity of this fibroblast does not cease, it, too, will rupture and die—one more casualty in the inflammatory wave of destruction precipitated by injury.

Until a short time ago no one had ever witnessed such a scene at the cellular level. Now, through advanced cinemicrographic techniques, it is possible to view and photograph the inflammatory process as produced experimentally in living animal tissue. This method permits new insight into the mechanism of inflammation and the role of corticosteroids in therapeutic management. Equally important, these techniques shed new light on factors that may make one corticosteroid more effective than another—factors that can be correlated with other chemical, biologic, and clinical parameters.

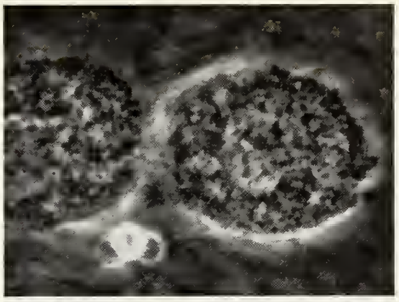


Visual evidence of how corticosteroids influence the inflammatory reaction

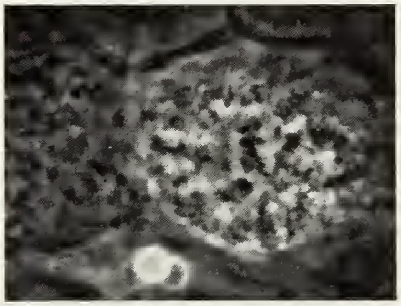
Working with phase-contrast cinemicrography on living animal tissue, Doctors Thomas F. Dougherty and David Berliner of the University of Utah College of Medicine have actually filmed cellular events that occur during the inflammatory reaction. This remarkable study* and additional work by these investigators, as well as by others, have established a new theoretical biologic basis for the antiinflammatory effect of the corticosteroids. (It must be noted that other theories, such as the lysosome or so-called "suicide bag" theory, have been postulated, although it is quite likely that there are more similarities than differences among the various theoretical models.)

The inflammatory wave of destruction

In this investigation an injurious injection of gelatin is used to set off an inflammatory reaction in living mouse tissue. What follows is a wave of destructive cellular activity that comprises the inflammatory response to injury. Mast cells (which contain heparin, serotonin and histamine) take up water, swell and rupture, releasing their contents, which are toxic outside the mast cell wall. These toxins, in turn, cause disintegration of other cells (such as fibroblasts) and the release of additional toxic material. Capillaries, too, take up water and leak unformed blood elements, causing edema. And polymorphonuclears, lymphocytes and perithelial cells invade the inflamed site. As a result of all these changes, the cellular environment reaches a state of turmoil.



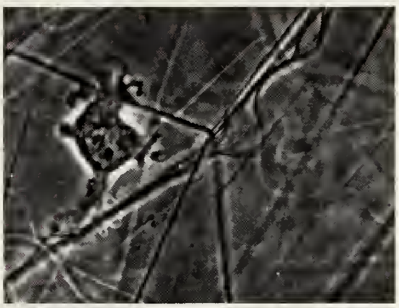
Phase-contrast microscopy showing mast cell before injury.



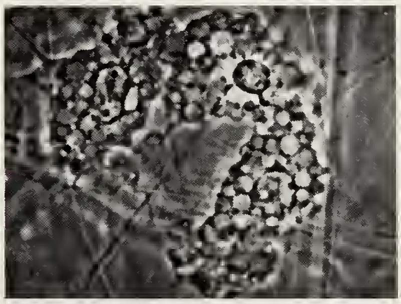
Mast cell (after injury) has broken up and released cytotoxins.

How corticosteroids change the picture

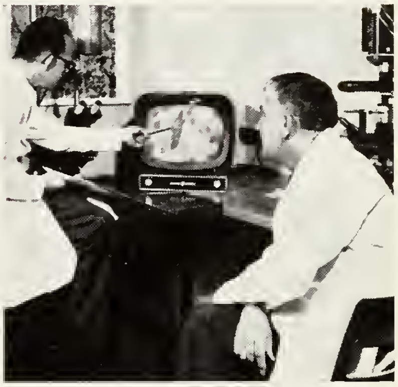
Corticosteroids appear to virtually stop the abnormal cellular activity that constitutes the inflammatory reaction. This permits the body's natural resources to clear up the inflamed area and repair the damaged tissue. This interpretation is supported by the fact that when the injurious gelatin solution is injected simultaneously with a corticosteroid – Synalar (fluocinolone acetonide) – the inflammatory pattern simply does not develop.



Fibroblast in high state of activity, much distorted.



Mast cells showing effects of corticosteroid action: cells are normal in size, shape and activity.



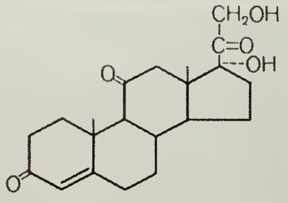
In summarizing his study Doctor Dougherty states: "...we also feel this work may explain why one corticosteroid helps a patient more rapidly and effectively than another. If it does, it is because one corticosteroid is the fastest, most effective inhibitor of the series of inflammatory events at the tissue level."

**A New View of Corticosteroid Action in Inflammatory Dermatoses,* a film based on this study, is now available from your Syntex representative.

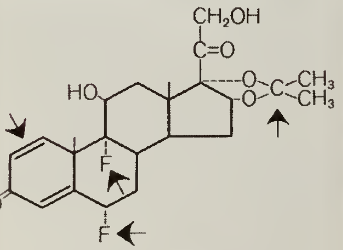
See last page for contraindications, precautions, side effects and dosage.

How advances in chemical design have achieved greater steroid potency

The chemical modification of corticosteroid molecules from the advent of hydrocortisone to the development of Synalar (fluocinolone acetonide) is a prime example of how biochemists can "design" to increase therapeutic activity and minimize undesirable side actions. Below, for example, we see the important changes that were made in reference to the hydrocortisone molecule to produce fluocinolone acetonide, one of the most active of all topical corticosteroids. As a result, a 0.01% preparation of Synalar (fluocinolone acetonide) has been reported to do the work of a 1% hydrocortisone product containing 100 times more cortiscosteroid. And it can often do it more effectively.



Hydrocortisone

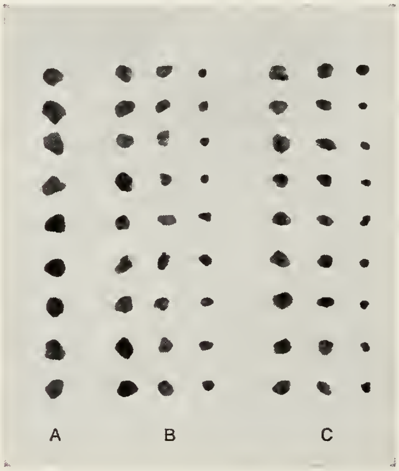


Fluocinolone Acetonide (Synalar)

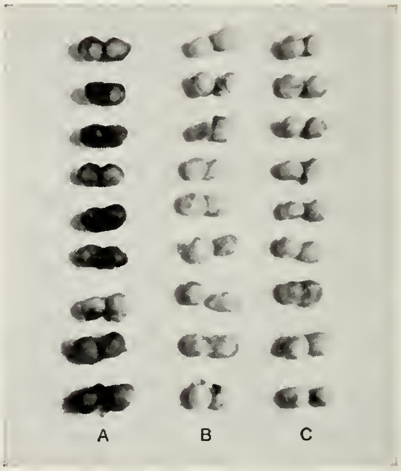
- ☐ *a double bond between carbons 1 and 2*
- ☐ *fluorine substitutions at both the 6-α, and the 9-α positions*
- ☐ *the addition of the acetonide at the 16-α, 17-α positions, thus providing one of the most potent topical corticosteroids available.*

How bioassay tests are used to "predict" therapeutic potential

Biologic assays are another tool used by researchers to help establish the relative activity of corticosteroids. To date no single method of assaying corticosteroid activity has emerged as the ideal "yardstick" for predicting therapeutic potential. Taken together, however, these methods have proved useful. When such tests are run on various corticosteroids, a definite order of corticosteroid activity becomes evident. Compounds with the highest order of activity may be expected to merit clinical trial to establish their high therapeutic potential. When assayed by these methods, fluocinolone acetonide (Synalar) emerges as one of the most active topical corticosteroids, milligram for milligram, available for clinical application today.



The Thymus Involution Assay[1-4] is run on adrenalectomized rats. The sizes of the glands are measured, and the degree of involution caused by the steroid is determined as an indication of its potency. In the above photo, the comparative involution of thymus glands achieved with hydrocortisone and Synalar (fluocinolone acetonide) is shown. Untreated controls (A) show normal size. Group B—injected with 1, 2 and 4 mg. of hydrocortisone—show progressively smaller thymuses as does Group C—injected with fluocinolone acetonide—but with only 1/500th the dose of hydrocortisone.



The Antigranuloma Assay[1-4] also utilizes adrenalectomized rats. Granulomas are induced by subcutaneous implantation of cotton pellets on either side of the thorax. The degree of granuloma inhibition achieved by a steroid reflects its potency. The above photo shows the inhibition of granuloma formation achieved with hydrocortisone and Synalar (fluocinolone acetonide). Untreated controls (A) show large, red granulomas adhering to the pellets. Group B, receiving hydrocortisone and Group C, receiving fluocinolone acetonide, show little, if any, granuloma formation. Fluocinolone acetonide produced the same effect as hydrocortisone with only 1/500th the dose. This assay, as well as the thymus involution assay, measures systemic rather than topical corticosteroid activity. Nevertheless, results by these methods correlate well with other assays and with the milligram potencies of topical steroids in current clinical use.

Worldwide clinical experience confirms the predictable therapeutic potential of Synalar

It is particularly gratifying that the promise of the advanced chemical design and high order of bioassay activity of Synalar (fluocinolone acetonide) has been confirmed by widespread therapeutic application. Indeed, the impressive clinical response rate of Synalar has been documented in no fewer than 232 papers from 22 countries.

Representative Clinical Results with Synalar*

Efficacy Documented in over 4,000 Patients

Condition	Number of Publications	Number of Patients	Significant Improvement†
Contact Dermatitis	27	750	713
Eczematous Dermatitis	21	472	409
Seborrheic Dermatitis	18	442	426
Atopic Dermatitis	24	460	426
Psoriasis	36	1,699	1,510
Neurodermatitis	18	351	324
Total	144	4,174	3,808

*Complete bibliography on request.

†Expressed by the authors as excellent, very good, good, complete remission of inflammation, etc.

PRESCRIBING INFORMATION

For initiation of therapy: Cream 0.025%, 5 and 15 Gm. tubes, 425 Gm. jars; *for emollient effect:* Ointment 0.025%, 15 Gm. tubes; *for maintenance therapy:* Cream 0.01%, 15 and 45 Gm. tubes, 120 Gm. jars; *for intertriginous or hairy sites:* Solution 0.01%, 20 cc. and 60 cc. plastic squeeze bottles; *for infected inflammatory dermatoses:* Neo-Synalar® Cream (0.025% fluocinolone acetonide, neomycin sulfate, equivalent to 0.35% neomycin base), 5 and 15 Gm. tubes. CONTRAINDICATIONS: Tuberculous, fungal, and most viral lesions of the skin, (including herpes simplex, vaccinia, and varicella). Not for ophthalmic use. Contraindicated in individuals with a history of hypersensitivity to any of the components. PRECAUTIONS: Synalar preparations are virtually nonsensitizing and nonirritating. However, the solution may produce burning or stinging when applied to denuded or fissured areas. In some patients with dry lesions, the solution may increase dryness, scaling or itching. While topical steroids have not been reported to have an adverse effect on pregnancy, the safety of their use on pregnant females has not absolutely been established. Therefore, they should not be used extensively on pregnant patients, in large amounts, or for prolonged periods of time. Prolonged use of any antibiotic may result in overgrowth of nonsusceptible organisms; if this occurs, appropriate therapy should be instituted. When severe local infection or systemic infection exists, the use of systemic antibiotics should be considered, based on susceptibility testing. SIDE EFFECTS: Side effects are not ordinarily encountered with topically applied corticosteroids. As with all drugs, however, a few patients may react unfavorably to Synalar under certain conditions. The neomycin in Neo-Synalar Cream rarely produces allergic reactions.

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CONJUNCTIVAL CIRCULATION IN RELATION TO CIRCULATORY DISORDERS

ISABEL LOCKARD, Ph. D.
HILDA S. DEBACKER, M. S.

The blood vessels of the bulbar conjunctiva constitute a readily accessible site for the microscopic study of circulation in unanesthetized people and have been studied by many observers.[1-3] The study of conjunctival circulation can be a useful, additional technique for the study of patients and should be particularly appropriate for ophthalmologists and other physicians who have suitable equipment such as a slit lamp or other biobjective microscope. Knisely and co-workers have shown that the blood circulating in the conjunctival vessels is a valid sample of that in the general circulation.[3-5] Unless otherwise specified, the term "conjunctival vessels" will be used here to include not only the conjunctival vessels proper in the superficial loose connective tissue, but also the underlying episcleral vessels. These vessels carry blood derived partly from the external carotid and partly from the internal carotid systems of vessels, by way of the palpebral branches of the nasal and lacrimal arteries and the anterior ciliary artery.[6] Although in man most of the blood supplying the orbital contents usually comes from the ophthalmic branch of the internal carotid artery, there frequently is an accessory ophthalmic branch of the middle meningeal artery, and there are various orbital connections between the internal and external carotid systems.[7]

The conjunctiva offers certain advantages for the study of circulation not provided by any other region of the body, including the retina. A light, bright enough for microscopic study, can be shone on the subject's conjunctiva with less visual discomfort than if it were directed onto his retina.[8] With a compound microscope, greater magnification and better resolution are possible than with an ophthalmoscope. In addition, since conjunctival vessels are close to the surface and covered only by a thin transparent membrane, the contents of the vessels as well as the contour of their walls are microscopically visible.

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The microscopic study of conjunctival circulation can provide certain kinds of information not available from laboratory blood tests. The blood is allowed to remain inside the blood vessels in the patient. Consequently, it is not altered by exposure to the air or glass, or by the addition of chemical agents. Certain characteristics of the physiology of circulation, such as the rate of flow, can also be evaluated.

Before discussing the kinds of things that can be seen in the conjunctival circulation, perhaps we should consider the microscopic characteristics of circulation in general. In an individual, animal or man, when the circulation is maximally healthy, individual blood cells are completely separate from one another. They do not stick together, nor does any morphologic item stick to any part of the vessel lining. The rate of flow is fast and, except in capillaries, it is too fast to see individual blood cells at magnifications used.[2, 8, 9] (See fig. 1.)

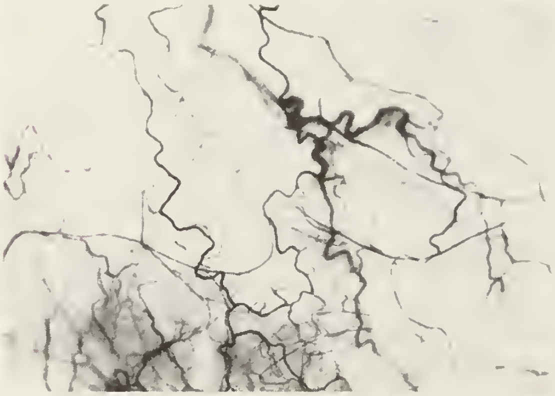

Fig. 1. Blood vessels of the bulbar conjunctiva of a healthy person. Note that the vessels are homogeneously filled and that the walls are smooth.*

In contrast to the blood in health, under various pathologic conditions blood is modified so that blood cells stick together into masses which are visible even at low magnifications (fig. 2). Masses may be large or small, rigid or soft. Soft masses, larger than the diameter of the vessel through which they pass, will crumble or change shape, but rigid ones will distend the wall as they pass through a vessel or become lodged in it and plug it. Blood cells agglutinated into masses form a sludge which decreases the rate of flow. The more agglutination there is, the slower is the flow. If the flow rate is slow enough, small masses tend to settle to the bottom of vessels.[10] (See fig. 3.)

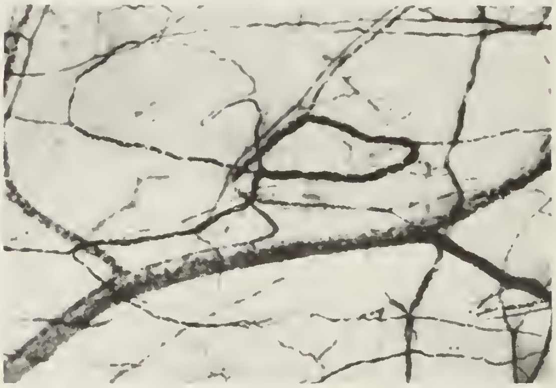

Fig. 2. Blood vessels of the bulbar conjunctiva of a patient, showing agglutinated blood. Note that in most vessels masses of cells are separated by clear plasma spaces and that in others, particularly the larger vessels, the blood column is not homogeneous in appearance.*

What significance can be attached to such phenomena? Briefly, the significance of sludge is twofold. On the one hand it results from some underlying disorder and indicates a pathologic state. On the other hand, sludge itself can produce disordered function and even anatomic damage. The consequences are multiple and complex. Since a comprehensive discussion of this subject is available in the literature,[9] only some of the main factors will be presented here.

If red blood cells are tightly wadded into masses rather than separate from one another, only the cells on the outside of the masses will be directly in contact with the plasma and the surface area available for oxygen ex-

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*(Fig. 2, page 217, in H. Harders: Uber das Sludge-Phänomen in seiner Beziehung zur Coronarpathologie. Bad Oeynhausener Conference II, October 18, 19, 1957, on "Probleme der Coronardurchblutung," pp. 215-226, Berlin, Springer-Verlag, 1958. Reprinted with permission of Springer-Verlag and of Dr. H. Harders, Universitätskrankenhaus Hamburg-Eppendorf, Germany.)

*(From fig. 2, page 162, in H. Harders and F. Fehse: Mikrozirkulation bei Makroglobulinämie, *Europ. Konf. Mikrozirkulation,* Hamburg, 1960. Bibl. Anat. 1:159-163, Basel, S. Karger, 1961. Reprinted with permission of S. Karger and of Dr. H. Harders.)

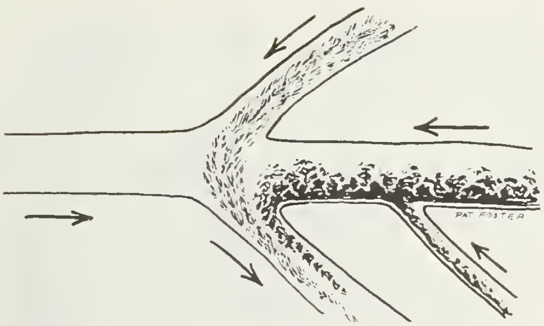

Fig. 3. Conjunctival veins lateral to the cornea, left eye, of a patient with mammary carcinoma (see text). In the large vein on the right and its tributary, blood cell masses had settled and were moving slowly along the bottom.

change thereby reduced. If a mass plugs a small vessel, the flow is of course stopped at that point and the tissue downstream from the plug may be deprived of its entire blood supply. Even if vessels are not plugged, masses offer resistance to the forward flow of blood and, consequently, decrease the rate of flow. When the rate of flow is slow, vessels tend to leak fluids and sometimes even cells. By slowing down the rate of flow, the number of red blood cells passing any neighboring tissue cell *per unit of time* is reduced, sometimes enough to jeopardize the oxygen supply of the tissue (fig. 4).

When conjunctival vessels leak, the superficial vessels, embedded in the loose connective tissue, become separated and rise up from the deep vessels anchored firmly to the sclera. The more edema there is, the greater is the distance between the superficial conjunctival and the deep episcleral vessels and the less detail can be seen in the deep ones. Sometimes diffuse or petechial hemorrhages can also be seen.

Differences in the form of vessels are sometimes evident. Irregularities of vessel walls, fusiform dilatations or sacculations can be seen when present. Sometimes vessels, particularly arterioles, are quite convoluted. Ditzel and Sagild[11] reported that in diabetic patients changes commonly occur in the walls of conjunctival vessels, particularly elongation of the venous part of capillaries and distention of the venules. Réthy[12] reported that in patients with glaucoma there is a dilatation of episcleral arteries just before they go into the sclera and that glaucoma can be detected by these changes before it is evident by tonometry.

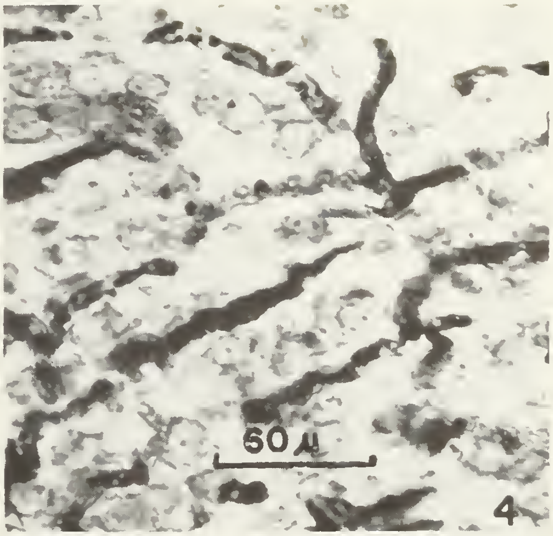

Fig. 4. Cerebral cortex showing capillaries and nerve cells. Capillaries are arranged parallel to one another and each supplies multiple cortical cells in the intercapillary space. (Cat, blood vessels filled with lead chromate, cells stained with thionin, 30 micron section.)

Aqueous veins, which carry aqueous humor from the canal of Schlemm into blood veins, sometimes are easily identified and sometimes are difficult or impossible to find. According to Ascher,[13] aqueous veins may extend as far as the temporal lid angle but they usually vary in length only from a fraction of a millimeter to about one centimeter. In one patient whom we studied we were impressed with the number and length of what appeared to be aqueous veins.[14] This patient had rheumatoid arthritis and a severe sludge. As his arthritis and his circulation improved with medication, many of the apparently aqueous veins became ordinary blood-carrying veins. Whenever clear (red cell-free) vessels are numerous or whenever they extend for any distance away from the pericorneal plexus, the possibility should be considered that such vessels are not true aqueous veins. Instead, they may be ordinary veins carrying plasma only, because blood cell masses have been trapped in small vessels or settled to the bottom of larger ones and so have been removed from the circulation before they reach the conjunctiva.

Observations of conjunctival circulation can be used for a variety of purposes: (1) Some features of the conjunctival vascular bed may be characteristic of certain diseases and therefore useful as a diagnostic aid. For example, as previously stated, the shapes of the vessels have been used as an aid in the diagnosis of diabetes[11] and of glaucoma.[12] (2) The microscopic study of conjunctival circulation can be used to evaluate the state of the circulation in patients with different kinds of disorders. (3) It can be used to determine the effects on the circulation of various agents or procedures used for diagnostic purposes, and (4) to determine the effectiveness of medication intended to improve the circulation, such as anticoagulant therapy.

In this laboratory, the conjunctival circulation has been studied in relation to the blood supply of the brain. Nerve cells require a rich blood supply. Some nerve cell bodies are individually encased in capillary baskets (fig. 5), but in other instances multiple nerve cells are supplied by single capillaries (fig. 4). Thews,[15] calculating the oxygen consumption of nerve cells, came to the conclusion that under the best of conditions the nerve cells farthest from the downstream end of capillaries receive barely enough oxygen to maintain them. Anything which decreases the rate of blood flow through brain capillaries then, is likely to reduce the oxygen supply of neurons and thereby impair their function or even kill them. Neurologic syndromes resulting from disruption of the blood flow through the major brain vessels are well known. Obviously, if the lumen of a vessel is reduced by a thrombus or an atheroma, less blood can go through. However, alteration of the blood from its normal, fast flowing unagglutinated state to a slow moving sludge must also greatly interfere with the circulation by restricting flow through many small vessels.

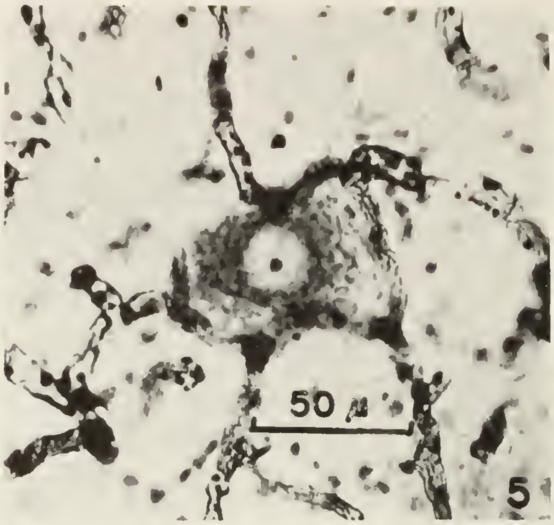

Fig. 5. Lateral vestibular nucleus showing large nerve cell encased in a capillary ring. Since the thickness of the section (30 micron) is considerably greater than the depth of focus of the microscope objective, not all parts of the surrounding capillary are in equally sharp focus. (Cat, blood vessels filled with lead chromate, cells stained with thionin.)

In one study of patients[*] with neurologic disorders[14] some were found to have a severe sludge; others, a moderate or slight amount of sludge. Some of those with severe or moderate sludge were treated with antimalarial drugs and their conjunctival circulation was examined from time to time. Antimalarial drugs were selected because they have been shown in the past to break up sludge in monkeys with malaria[16, 17] and in certain other conditions in people.[18] At first, the patients whom we studied were given Plaquenil® (hydroxychloroquine) but because of reports of eye damage with the use of chloroquine[19] the medication was changed to quinine for prolonged treatment. In some of these patients the conjunctival circulation improved considerably and there was a corresponding clinical improvement.

In two patients, the conjunctival circulation did not respond consistently to the medication. This inconsistency suggested that some factors other than the medication might also be affecting the circulation. One woman showed a significant initial reduction in sludge but no further change for six months.

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[*] Most of the patients in this series were in the care of Dr. C. Capers Smith. The authors gratefully acknowledge his cooperation in this study.

A carcinoma of the breast was found. After recovery from a radical mastectomy, her circulation was greatly improved without any medication. Then the sludge worsened to pre-surgery levels (fig. 3). Again, with quinine therapy there was an initial improvement which again did not last. Metastases were found and the patient subsequently died. In another patient with a severe sludge, the circulation improved considerably on antimalarial therapy. Then the sludge increased again and was unchanged either on or off the medication. During this period he had a hemorrhoidectomy. Then a bladder infection was found, and a benign growth of the bladder was discovered and removed. Treatment of the infection continued for several months. After the infection had cleared up, the conjunctival circulation was much improved. These two cases suggest that some disorder, whether or not it has been clinically detected, may produce sludge faster than a drug can break it up. When a patient has a marked sludge that does not respond well to medication, it might serve as a cue that the patient needs careful evaluation by other methods to determine the nature of some hidden disorder.

In another project, the conjunctival circulation of patients undergoing cerebral angiography was examined before and after the procedure.[20] Cerebral angiography is used to detect different kinds of intracranial pathology, including thrombosis or stenosis of cerebral vessels. Unfortunately, following the procedure, complications such as blindness or hemiplegias, or even death, sometimes occur.[21] The presence of marked atheromatous disease of the cerebral vessels is said to increase the expected morbidity and mortality from cerebral angiographic studies.[22, 23] In most of the patients whom we studied,[20] after the introduction of a contrast medium into the carotid artery there was a noticeable increase in the amount of agglutination in the conjunctival vessels on the side of the injection. As already shown in our studies,[11] some patients with neurologic disorders have a severe sludge. In a patient whose cerebral blood supply is already impaired, either because the size of the supplying vessels is too small or because of a pre-existing sludge, the contrast medium may superimpose enough additional agglutination to embolize some vessels, and reduce the rate of flow in others to a critical level and so precipitate additional neurologic disorders.

In a third study, the conjunctival circulation of patients with psychiatric disorders was examined before and after electric shock treatments.[24] Some of these patients also had a severe sludge. Following the treatment there was no increase or decrease in the degree of agglutination seen prior to the treatment. There was, however, a tremendous dilatation and some elongation of the conjunctival vessels. Blood in the veins also changed to a bright scarlet, the color of blood in the arteries. This change in color was seen first in patients who had been given Anectine® (succinylcholine) followed by oxygen. To determine whether the arterial color of the veins was due to the oxygen administration, a second series of patients, given shock treatments with no premedication and no oxygen, was also studied. The same color change occurred in these patients also. Although the reason for the change in color of the veins was not established, it may have indicated that less oxygen was being taken up by the tissues so that blood, still oxygenated, was carried into the veins. If the same changes occur in the brain as are evident in the conjunctiva, and this hypothesis is true, decreased oxygen uptake by brain tissue could account for the memory loss which so often follows electric shock therapy.

Summary

Conjunctival vessels provide a readily accessible site for the microscopic study of the circulation. Such studies can supply certain kinds of information not otherwise available. The purpose of this paper is to point out some of the kinds of things that can be seen with this technique and to suggest its use as an additional procedure in the study of patients. Some of the characteristics of normal and pathologic microcirculation are described and the significance of the alterations from

the normal is briefly discussed. Biomicroscopy of conjunctival circulation can be used to determine the state of the circulation, to evaluate the effects on circulating blood and blood vessels of various diagnostic or therapeutic procedures or of medication. For example, in this laboratory we have studied the conjunctival circulation of patients undergoing cerebral angiography or electroshock treatments and of patients with neurologic disorders, some of whom were treated with antimalarial drugs. Other observers with other interests may be able to utilize this technique to fit their own purposes.

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MYCOTIC ANEURYSM DUE TO SALMONELLA

REPORT OF A CASE AND REVIEW

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JAMES C. McALPINE, M. D.
JENNINGS K. OWENS, M. D.

Primary or cryptogenic mycotic aneurysms, especially those due to infection with salmonella organisms, have been reported surprisingly infrequently in medical writings. This paper reports such a case due to Salmonella choleraesuis, involving the femoral artery with subsequent rupture and death of the patient by exsanguination.

It is important to bring such a case to the attention of the medical profession because of the simultaneously increasing frequency of salmonella infection and of atherosclerosis in our population, indicating that primary mycotic aneurysm will be seen more often than in the past.

Case Report

A 55 year old white male meat packing employee was admitted to the Marlboro County General Hospital on August 6, 1962, with pain in the left groin and upper thigh and fever of 6 days duration. There was no past history of hypertension or diabetes, though he had noted polydipsia, polyuria and loss of 15 pounds of weight over the previous several weeks. He worked in a meat canning factory and was exposed to dead fowl and animal carcasses.

On physical examination, the temperature was 103.6° F. orally, pulse 108, respirations 20, blood pressure 170/90 mm Hg. The liver was felt 8 cm below the right costal margin and the spleen was barely palpable. Just below the left inguinal ligament was an erythematous, tender, warm indurated area of swelling about 6 cm in diameter.

Admission Laboratory Work: Urinalysis was normal except for 1 plus albumin and 4 plus sugar; leucocyte count 10,550 with 88% polymorphonuclear neutrophils, 12% lymphocytes; hemoglobin 13 Gm/100 ml; fasting blood sugar 262 mg.; Agglutinations for typhoid, paratyphoid A & B, and tularemia were negative. Roentgenograms of the chest and left hip were normal.

Course in the hospital: Procaine penicillin 600,000 units was administered IM every 8 hours. Continuous warm saline compresses were applied to the groin. Regular insulin was given to control glycosuria.

Oral temperature continued between 100 and 102° F. The swelling below the left groin became softer. On the 7th hospital day the mass was aspirated, and only a small amount of sanguino-purulent material was obtained. On the 8th hospital day the left leg swelled rapidly from the groin to the foot, the calf became tender and there was a positive Homan's sign. The entire leg was warm and there was mottled cyanotic discoloration. The clinical impression was ileofemoral thrombophlebitis secondary to abscess in the left inguinal region. Thrombolysin, 100,000 units, was given intravenously daily for 3 days and heparin 10,000 units subcutaneously was administered every 8 hours. By the 12th hospital day the leg was improved, the general swelling having decreased, the color having improved, and the mass in the left inguinal region was a little less swollen, tender and firm. An oral anticoagulant in the form of Warfarin was begun and the dose of heparin gradually decreased.

On the 15th hospital day the patient developed severe pain in the left groin accompanied by a rapid increase in size of the mass and marked cyanosis of the distal part of the foot. Anticoagulants were discontinued on the 16th day, the left femoral triangle area was explored surgically. A large hematoma under the fascia of the thigh and within the femoral sheath was found, forming a false aneurysm. The femoral artery was markedly sclerotic and almost completely disintegrated due to spontaneous rupture, and there was active bleeding which was controlled by application of arterial clamps. The aneurysural sac was removed. A catheter was passed through the proximal portion of the femoral artery into the left iliac artery and arteriography was performed. The films demonstrated an adequate runoff and collateral circulation. The femoral artery was tied off. The circulation to the lower extremity appeared to be good.

A culture obtained at this time grew Salmonella choleraesuis sensitive to colymycin, resistant to chloramphenicol, penicillin, streptomycin, oxytetracycline, erythromycin, tetracycline, and novobiocin. Histologic examination of the removed tissue was reported as showing laminated thrombosis with heavy inflammatory reaction but with no recognizable vessel wall.

From: Marlboro County General Hospital, Bennettsville, South Carolina.

Grossly, the tissue was saccular in outline with a very smooth lining. These findings were consistent with the diagnosis of false aneurysm.

Postoperatively the general appearance of the left leg improved. The operative wound did not heal, however, and a foul smelling sanguino-purulent drainage developed. Chloramphenicol, 500 mg every 4 hours, was administered. A moderate anemia developed and the patient was given two transfusions of 500 ml of blood.

Low grade fever persisted. Copious, foul smelling brownish purulent drainage continued from the wound. The distal portion of the left foot became cyanotic and the distal portions of the toes developed superficial gangrene. The patient seemed to be holding his own when, on the 32nd hospital day, there was a sudden massive hemorrhage from the wound in the left subinguinal region. Before the bleeding could be controlled or the blood replaced, the patient expired of exsanguination from a large rupture in the proximal stump of the femoral artery.

Discussion

Incidence. That primary or cryptogenic mycotic aneurysm due to salmonella infection has not been seen very commonly in the past is suggested by the fact that Hankins & Yeager[1] in 1956 reported what was described as the second case on record of a mycotic aneurysm due to salmonella. The only proved case they could find prior to this was reported in 1953,[2] though Cathcart[3] had described a probable case in 1909. Zak, Strauss and Saphra[4] reported 10 cases in 1958, Ten Eyck and Wellman[5] a single case in 1959, and Blum and Keefer[6] two more cases in 1962. Thus, 16 proved cases or primary mycotic aneurysm due to salmonella have been reported previously.

Pathology. Sir William Osler[7] first used the term mycotic to describe aneurysms caused by infectious organisms. Those mycotic aneurysms arising in the absence of a primary focus, such as in subacute bacterial endocarditis or from the surrounding tissues, are termed primary (Crane[8]) or cryptogenic (Blum & Keefer[6]).

Eppinger[9] in 1887, and more recently Hankins and Yeager[1] have described the pathology of mycotic aneurysms in detail. Mycotic aneurysms are usually smaller than syphilitic aneurysms. They are of no characteristic shape. Their development varies with the virulence of the organism. If the organism is highly virulent, the arterial wall disintegrates rapidly and ruptures before dilation occurs, thus producing a false aneurysm. In subacute cases, dilation occurs due to dissolution of the elastic fibers and the arterial walls become thickened and fibrotic. The intima may continue to form a part of the lining. Thrombosis may occur and fibrous tissue may eventually obliterate the sac.

Previous damage to the vessel wall from atherosclerosis, syphilis, or congenital weakness predisposes to infection and the formation of a mycotic aneurysm. Mycotic aneurysms are very prone to rupture. In a study of 179 atherosclerotic aneurysms examined at autopsy at the Mayo Clinic[10] 3% were secondarily infected; of the infected aneurysms 67% had ruptured, as opposed to 18% of those not infected.

Bacteriology. Pneumococci, streptococci, gonococci, E.coli and aerobacter have been implicated in mycotic aneurysms.[11, 4] In more recent reports,[1, 4, 6] staphylococci and salmonella organisms have been more frequently involved. Of the salmonella organisms cultured, there were 6 typhimurium, 5 choleraesuis, 1 each of typhosa, newport, oranienberg and infantis. The case herein reported was caused by choleraesuis, one of the 2 most common organisms of the salmonella group reported to cause aneurysms.

There has been a marked increase in the incidence of salmonella infections in this country, as illustrated by the report of McCready and others.[12] In Massachusetts, there were 58 cases reported in 1950, and 578 in 1956. In the United States, there were 1,223 cases reported in 1950 and 5,447 in 1955. Interestingly, the standard TAB vaccine produces immunity to groups B, D and to salmonella paratyphi, but provides no protection against salmonella of the C group which accounts for nearly half of human infections occurring in the United States. The frequent association of salmonella organisms on and in poultry products and poultry processing plants has been emphasized.[13]

Clinical Aspects. Mycotic aneurysms occur twice as frequently in males as in females, perhaps due to greater exposure and to a greater degree of atherosclerosis. The age of previously reported cases of mycotic aneurysms due to salmonella varied from 55 to 76 years. Our case, aged 55, is as young as any reported, indicating the importance of atherosclerosis and degenerative changes as predisposing factors.

Salmonella aneurysms are located most frequently in the femoral artery (6 cases) and in the abdominal aorta (5 cases). One case each has been reported in the thoracic aorta and the common iliac artery.

Age and the presence of atherosclerosis are the most important predisposing factors. Diabetes would be expected to play a role but only 2 of the previously reported cases had this disease. A definite history of exposure is not commonly obtained. One case was exposed to a patient with a salmonella infection on board ship, another drank raw milk and another was a retired butcher. The patient reported in this paper was employed in the dressing of fowl and may well have contracted his infection as a result of occupational exposure.

Symptomatically, these cases are characterized by the absence of systemic disease other than atherosclerosis, by the insidious nature of the onset, by the dramatically rapid sequence of clinical events and by the extremely serious threat to life and limb. The onset is with fever. An internal aneurysm may rupture before reaching a large enough size to be detected, with resulting rapid and severe shock. In the extremity, the development of a pulsating mass that is warm, painful and tender may make the diagnosis quite obvious. However, several cases including the one reported here, have had a very insidious onset with fever, malaise and symmetrical swelling, so that the initial diagnosis was thrombophlebitis. The occurrence of rupture with the formation of a false aneurysm results in an increase in both swelling and pain and evidence of circulatory impairment distally, such as absent pulse and cyanosis.

Leucocytosis (11,000 to 34,000) occurred in the great majority of cases, though a few had normal white blood counts. None had leucopenia. The blood culture was reported positive in only 6 of 16 cases and was negative in our case. Culture of the aneurysm or abscess is uniformly positive if suitable media are employed as the local lesion is very heavily contaminated.

The prognosis is very grave unless the diagnosis is made early. Many of the reported cases have been diagnosed at autopsy, the patient having expired rapidly in shock from rupture of the aneurysm. Of the 15 cases previously reported, 5 or 33% survived, all with aneurysms of the peripheral vessels.

Treatment. Ligation or excision and grafting is the treatment of choice and must be performed early to be successful. Antibiotic therapy in the form of chloramphenicol or ampicillin is helpful from the standpoint of sterilizing the blood stream, but does not hold much promise as far as the local lesion is concerned. A most troublesome factor has been persistent infection throughout the tissues of the operative area. The longer the interval between rupture and treatment the wider is the dispersion of organisms, the greater the degree of tissue necrosis, and of ischemia in the distal part of the extremity.

Summary

A case is reported of a primary mycotic aneurysm of the femoral artery due to Salmonella choleraesuis in a 55 year old diabetic, who may have contracted his infection from dressing fowl. The onset was insidious with fever and swelling just below the inguinal ligament so that ileofemoral thrombophlebitis was suspected. A sudden increase in swelling and pain led to aspiration from the mass bloody material which on culture grew Salmonella choleraesuis. The femoral artery was explored and a rupture with false aneurysm was found. The femoral artery was ligated. Postoperatively the wound remained infected despite administration of chloramphenicol. On the 32nd hospital day there was a sudden massive outpouring of blood from the femoral stump and before the vessel could be ade-

quately occluded, the patient expired from exsanguination.

This case is reported in order to alert physicians to an extremely serious entity which, though infrequently reported in the literature, will increase in frequency in the future. Mycotic aneurysm should be considered in all patients with an atypical picture of thrombophlebitis, those with arterial aneurysms and fever and in cases of salmonellosis with the sudden development of shock.

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Bronchial lavage in the treatment of obstructive lung disease—H. T. Thompson, W. J. Pryor, and J. Hill. Thorax 21:557-559 (Nov) 1966.

The use of bronchial lavage in 92 patients with obstructive lung disease is reported, with a follow-up of one to four years. Intractable asthma is the primary indication but a number of patients with bronchitis and emphysema have also benefited. Lavage, which rids the bronchial tree of casts and mucus, is regarded as an incident in the management of the patients, all of whom had a full range of antispasmodics, steroids, antibiotics, and physiotherapy previously. The patient is bronchoscoped under deep ether anesthesia and the bronchi washed out with 800 to 1,500 ml of physiological saline. Casts and mucus are aspirated. Although some cases in status asthmaticus were moribund at the time of operation, no deaths in this series have been attributable to the procedure. Of the 92 patients, 30 were greatly improved and have so remained for up to four years. Twenty-seven patients were significantly improved and have so remained, 35 were not improved or showed only temporary improvement. In this last group 15 patients died subsequently despite all therapeutic measures.

THE THORACIC AORTA

PART I. EMBRYOLOGY. VASCULAR RINGS.

R. RANDOLPH BRADHAM, M. D.*
WILL C. SEALY, M. D.**

Embryology of the Aortic Arch and Its Major Branches

The adult aorta and its branches are formed from the ventral and dorsal aortic roots, and portions of the third, fourth, and sixth aortic arches. The ventral aortic roots arise from the aortic sac and become continuous with six pairs of aortic arches bilaterally. These arches terminate in the paired dorsal aortas. The latter fuse to form one vessel. The six arches appear successively and all are not present at any one time. The first two degenerate to plexuses which become a source of nutrition to local tissues. The fifth arches disappear shortly after they are formed.

The aortic sac is divided by the growth of the spiral bulbar septum into an aortic trunk and a pulmonary trunk which become the ascending aorta and main pulmonary artery. Blood coursing through the aortic trunk is distributed to the third and fourth arch arteries and that coursing through the pulmonary trunk is distributed to the sixth arch arteries only.

The segments of dorsal aortas between the third and fourth arches disappear and the third arches in combination with earlier cranial projections of the dorsal aortas become internal carotid arteries. The external carotid arteries appear as new outgrowths of the aortic sac and their bases migrate up onto the third arches. The common stem of the third arch proximal to the origin of the external carotid becomes the common carotid artery.

The right dorsal aorta, between its junction with the right fourth arch and its fusion with the left dorsal aorta degenerates. The right subclavian artery is thus formed by the right dorsal aorta and the seventh intersegmental artery which has migrated cranially along the right dorsal aorta. The right limb of the aortic sac elongates and forms the innominate artery of which the right common carotid and subclavian arteries finally become divisions. The left fourth aortic arch has a different fate. It makes up a small portion of the transverse aortic arch. The ventral and dorsal aortic roots make up the greater portion. The left subclavian artery develops from the left seventh intersegmental artery. This artery migrates cranially along the left dorsal aorta to assume its definitive position along the arch in close association with the left common carotid artery.

Descending branches are given off from the sixth pair of arches to the plexuses of the developing lung buds and these become the pulmonary arteries. The right sixth arch distal to the origin of the primitive pulmonary artery disappears. The terminal part of the left sixth arch persists until full term as the ductus arteriosus. This usually collapses when definitive pulmonary circulation is established and becomes the fibrous ligamentum arteriosum between the left pulmonary artery and the dorsal aorta.

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From the foregoing, some of the anomalies of the arch and great vessels becomes understandable. The persistence of both aortic arches results in a double arch surrounding the esophagus and trachea. Persistence of the right arch and disappearance of the left arch results in a right aortic arch from which a ligamentum arteriosum can arise and join the left pulmonary artery to form another type of tracheal and esophageal encirclement. Failure of the right seventh intersegmental artery to migrate cranially or a persistence of the distal right arch to which this intersegmental artery is attached may result in the right subclavian artery originating from the descending aorta. Variations in the origins of the arch vessels can occur from disturbances in growth of the arches or arrest in the normal formation of these arteries. Other variations such as interruption of the aortic isthmus and hypoplasia of the arch occur rarely.

Vascular Rings

Normally the trachea and esophagus have a very close relationship with the aortic arch and the descending aorta. From a study of the embryological development of the aortic arch and its branches, it is obvious that there are any number of malformations which may occur that could compress the esophagus and trachea by encirclement or by displacement. These anomalies are only important when they produce significant tracheal obstruction and dysphagia. Anomalies of the arch and its branches which have been entirely asymptomatic are not infrequently found during thoracic procedures and gastrointestinal x-ray studies. Although these anomalies are usually referred to as vascular rings, there are some that are not complete rings, but for convenience are placed in this group. The detailed classification has been given by Stewart, Kincaid, and Edwards in an atlas on this subject[7] and by Helen Taussig.[8]

Only the commonest types producing symptoms will be discussed. The principles of treatment of these more common malformations would apply to the many variants which might be encountered.

Classification

1. Double aortic arch.

A double aortic arch develops when both the right and left arches persist and these form a ring encircling the trachea and esophagus as they unite posteriorly to form the descending aorta. This is the most common anomaly and occurred in 52 of 129 cases reported by Gross.[3] In approximately two-thirds of the cases reported, the right posterior arch is the dominant vessel. Both vessels can remain patent or either can become obliterated and remain as a fibrous cord. The aorta usually descends on the left but may descend on the right. The origin of the great vessels is quite variable.

2. Right aortic arch descending on the left with persistent left ductus arteriosus or ligamentum arteriosum.

With this anomaly, the right aortic arch persists. After passing to the right of the trachea and esophagus, it courses posteriorly to them and descends on the left side. This is usually brought about by the pull of a persistent ductus or ligament which in this anomaly may arise either from the aorta or left subclavian artery and connects with the pulmonary artery. A complete encirclement which compresses the trachea and esophagus thus exists. This anomaly accounted for 32 of 129 cases reported by Gross.[3]

3. Aberrant right subclavian artery.

This variant, long referred to as "dysphagia lusoria", is common but rarely causes symptoms. When it does so, the symptoms are related to difficulty in swallowing and not to tracheal obstruction. In Gross'[3] series, 14 of the 129 patients had this anomaly. In a series of infants reported by Gerbode, Obrien, Kerth, and Robinson,[2] it was more commonly an incidental finding, associated with a more important cardiovascular lesion. In only one infant was operation done specifically for correction. It was an incidental finding in four others with major cardiovascular anomalies. In the Duke series, this was an incidental finding during excision of coarctation of the aorta. Of six infants observed by Mahoney,[5] four continued to have only mild dysphagia and did not require operation. The other two developed more marked symptoms and were corrected.

The right subclavian artery arises from the left side of the arch and then courses upward and to the right to reach its normal position in the apex of the chest. It more commonly courses behind the esophagus, but rarely it may course between the esophagus and trachea, or in front of the trachea. In any case, a ring is not formed. There has been one very interesting case in our experience where the descending aorta was pulled far to the right by an aberrant right subclavian artery and resulted in impingement of the right main stem bronchus between the normal ascending aorta and the descending aorta and actually displaced the esophagus to the right. This infant developed pneumonitis and subsequently died. Autopsy findings conformed to those previously found on bronchoscopy and bronchograms.[6]

4. Anomalous innominate artery or left common carotid artery.

In this anomaly, the great vessels are only slightly displaced either because of elongation of the aorta or unusual location of their origin. The innominate artery can originate at a point more distal than normal and the left common carotid artery can arise at a point further to the right. In both of these situations, the trachea is actually trapped in a "V" caused by the arrangement of the arch vessels or can be compressed by the impingement of one of these displaced vessels on its anterior surface. In this group the esophagus would not be compressed and therefore would show no displacement on barium swallow. Such a condition occurred in 16 of the 129 patients reported by Gross.[3]

Diagnosis

Aortic arch anomalies which compress the trachea and esophagus can cause severe symptoms which begin shortly after birth. Noisy respirations, stridor, coughing, choking, tachypnea, the position of neck hyperextension, and loss of consciousness are all indicative of severe tracheal compression. Less severe compression usually leads to noisy breathing, increased mucous secretion, and to repetitious respiratory infections. This may be a difficult diagnosis to make because of having to differentiate these anomalies from tracheomalacia, flexible larynx, asthma, and acute bronchitis.

Constriction of the esophagus may cause difficulty in swallowing, regurgitation, and aspiration. This frequently will cause choking during feedings and is sometimes followed by pneumonitis. Compression of the esophagus posteriorly by an aberrant right subclavian artery will cause dysphagia of varying degrees. It is well to remember that compression of both the trachea and esophagus or either singly occurs depending upon the anatomical arrangement of the arch and its major vessels. It is not unusual that an anomaly is found at operation that has been entirely asymptomatic Important also is the development of symptoms later in life, brought on by arteriosclerosis and tortuosity of the aorta, as was demonstrated by one of our patients who developed dysphagia when she was 51 years old. Division of the lesser components of a double arch completely relieved her symptoms.

Diagnosis with identification of the type of anomaly present can usually be made from x-ray films of the chest and examination of the esophagus with barium. Only posterior compression with an oblique defect pointing upward and to the right will indicate an abnormal right subclavian artery. The double arch causes indentation of the esophagus bilaterally as well as posteriorly. When the right or posterior arch is predominant, the posterior indentation is large and the anterior indentation made by the left or anterior arch is small and the converse of this is true with a predominant left or anterior arch. When the aorta descends on the right the lower esophagus is on the left. With a left descending aorta the esophagus will lie in the midline or to the right. A major right arch with a persistent ligamentum arteriosum or patent ductus on the left usually causes a bilateral esophageal defect and narrowing of the trachea. In contrast to the others, all of which show esophageal change, the anomalous innominate and left common carotid arteries cause only compression of the trachea, which is best seen after tracheogram but is sometimes evident on ordinary chest films. Clarification of these anomalies can best be made by angiocardiograms and retrograde aortograms. A careful evaluation of the tracheal lumen is extremely important, for in some patients, particularly the older ones, the lumen is actually poorly developed and stenotic in addition to being compressed.

Treatment

Operative correction for these anomalies is indicated when a child is having more than mild symptoms of respiratory or esophageal compression especially when pulmonary infection and maldevelopment are a part of the clinical course. Demonstration of the anomaly preoperatively is essential and clarification of the type is highly desirable. A preoperative period of treatment with specific antibiotics and tracheal toilet may be needed for proper preparation.

Anesthesia in treatment demands the utmost care, for the trachea may be actually stenotic, or the cartilages in the area may be attentuated so that when edema develops, as it may from intratracheal intubation, it can cause a fatal outcome. Of seven infants operated upon for a double aortic arch and reported by Gammelgaard and associates,[1] two died two months after operation at ages four and seven months due to pulmonary complications in connection with a preoperatively applied tracheostomy. In a third infant, a tracheostomy was necessary during the first postoperative day and the tube had to remain in position through the area of constriction for 11 months.

The operative approach is important and sometimes difficult to plan properly to gain best exposure of the anomaly. The majority of these can be approached best through a left posterolateral incision through the fourth intercostal space, though Gross prefers exposure through an anterolateral incision in the third intercostal space. It is our preference to use such an anterolateral incision for correction of those anomalies confined to the anterior mediastinum, such as the anomalous innominate and left carotid arteries. The surgeon must avoid any maneuver within the chest which angulates the trachea and interferes with ventilation. At operation all arteries must be identified accurately, and this can best be done by temporary occlusion and by following their course. All fibrous bands and adventitial tissue associated with the anomaly must be divided in addition to the major structure causing compression so as to free the trachea and esophagus. Great care must be given to dividing the arteries, oversewing being preferable to ligature when the stump is short.

The general aim of surgical correction is to divide the offending vessel or ligament and decompress the trachea and the esophagus or both. The second objective is to displace vessels anteriorly that are causing anterior compression of the trachea. In young infants in which these anomalies occur, the single subclavian vessels can be ligated and divided with no dire consequences related to blood supply. When no other cardiac or great vessel anomaly is present, operation is straightforward and results are quite satisfactory.

The trachea should be carefully inspected to determine the state of the cartilages and the presence of a true stenosis. If present, one should give some thought to tracheoplasty then or later if trouble occurs.

1. Double aortic arch.

One arch is usually dominant, and most of the time it is the right. Therefore, the lesser of the two arches is to be divided. If there is a persistent patent ductus or ligamentum arteriosum, it is divided also, especially when the dominant and remaining arch is on the right. All other bands and fasciae associated with these vessels are removed.

When the anterior arch is the smaller and it is to be divided, the point of division must be such that the two transected ends are of sufficient length that ligation can be done securely. Also, blood flow through the carotid artery must be preserved. This division can usually be accomplished between the left carotid and left subclavian arteries. Flow to the carotid is through the proximal portion of the anterior arch. When the right or posterior arch is to be transected, division is usually safe distal to the innominate when the innominate arises from the right arch.

Gross and Ware[1] stressed the importance of the additional step of drawing forward the left common carotid artery and suturing it to the sternum when the anterior arch is divided. Likewise, when the posterior arch is divided, the anterior arch is brought forward by the same maneuver. The anterior wall of the trachea is thus pulled forward and its lumen allowed to enlarge. Four or five mattress sutures of 2-0 or 3-0 silk are passed through the adventitia of the vessel with care to avoid passage of the needle through its wall. These sutures are then threaded onto large cutting needles, passed through the sternum, and tied on its anterior surface with sufficient tension to draw the vessel away from the trachea.

2. Right aortic arch descending on the left with persistent left ductus arteriosus or ligamentum arteriosum.

In this anomaly the descending aorta is displaced over to the left and the left subclavian at the terminal aorta is posterior to the esophagus and trachea. The ligamentum or ductus is widely mobilized and divided. The recurrent laryngeal nerve should be identified and protected as it courses beneath the ligamentum arteriosum and then upward in close proximity to the esophagus. The esophagus and trachea are freed from all restraining bands. The aorta is mobilized and allowed to retract to the right as far as possible. It has been suggested that the left subclavian artery be divided if its posterior position significantly impinges on the esophagus and trachea.[3], [6]

3. Aberrant right subclavian artery.

Surgical correction for this anomaly is relatively simple. After thorough exploration of the posterior mediastinum with positive identification of the right subclavian artery, its first portion is mobilized and it is divided between double ligatures. Division at its base allows sufficient blood supply through collateral channels to provide adequate supply to the right arm. If a ductus arteriosus is present, it too is divided.

4. Anomalous innominate artery or left carotid artery.

These anomalies are approached through an anterolateral incision through the third intercostal space as the correction is done in the anterior mediastinum. In this procedure one only displaces the vessels which impinge upon the trachea, as division would be out of the question since either the left innominate or left carotid are always involved. The thymus is removed to allow room to displace the offending vessels anteriorly. The vessels and the aorta are mobilized from the anterior surface of the trachea. Mattress sutures are placed through the adventitia and distributed from the base to the superior aspect of the artery and are then passed through the sternum. These sutures are tied on the anterior surface of the sternum with sufficient tension to displace the vessel anteriorly, completely freeing the trachea.

Postoperative Care

Postoperatively, the infants are placed in a Croupette with high humidity and high oxygen and given minimal sedation. The principal problem, even when adequate surgery has been performed, is the maintenance of an airway. An indwelling intratracheal tube that traverses the narrowed trachea would more than likely cause sufficient edema to necessitate a tracheostomy if it is allowed to remain in place for 24 hours or more. A tracheostomy has the problem of adding infection. Because it necessarily must be placed through the narrowed segment, the maintenance of the position of the tube is difficult and may result in obstruction from time to time of a stem bronchus. Therefore, if at all possible, both the intratracheal tube and the tracheostomy tube should be avoided.

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Unsuspected foreign bodies of the eye. William W. Vallotton, M. D., W. L. Davis, Jr., M. D. (Charleston). South Med J, 59:1165 (Oct. 1966).

Not all penetrating injuries to the eye present themselves as a classical case. Some of todays machines, such as jet turbines, revolve at tremendously high velocity. This fact coupled with some of the newly developed hard alloys might lead one to anticipate an even smaller sized particle with velocity high enough to enable it to penetrate the eye. The high speed, smaller sized particle may conceivably result in an increase of small, silent, penetrating ocular wounds.

According to Duke-Eldar, particles smaller than .25 mm rarely penetrate the tough outer coats of the eye. Presumably this is because the small particulate size lacks sufficient mass to develop adequate kinetic energy regardless of a rather high velocity, even though the velocity is the more important factor of the two.

Nine cases are reported in which previously unsuspected foreign bodies were found. The following table lists some of the signs that we have found present in previously unsuspected foreign bodies of the eye: tumor (granuloma) of lid, tumor (granuloma) of conjunctiva, monocular hyphema, recurrent monocular segmental bullous keratopathy, monocular cataract—segmental or varicolored, monocular mydriasis, signs of zonular weakening, tumor (encapsulated foreign body) of iris, heterochromia iridis, unilateral uveitis, monocular segmental chorioretinal changes, and monocular segmental vitreous bands.

THE CLINICAL VALUE OF BLOOD GAS ANALYSIS

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The value of blood gas analysis is not well understood by the average physician. It is the purpose of this paper to define blood gas analysis, state the normal values, show the variations in disease and abnormal conditions, and suggest a few general corrective measures. No detailed theory or complex formulas are discussed.

Definitions

Blood gas analysis is the term used for determination of blood pH, pCO_2 and pO_2.

Blood pH is a measure of the hydrogen ion concentration in the blood. Until recently, an apparatus which would yield dependable results was not readily available. Now, reproducible accurate controlled results can be obtained quickly with relatively little chance for technical error, provided proper precautions (constant temperature, regulated current, clean electrodes, properly drawn blood in heparinized containers, instrument set with standard solutions, etc.) are taken.

Blood pCO_2 refers to the partial pressure of carbon dioxide and is proportional to the CO_2 dissolved in a liquid. It presents similar changes (increase or decrease) as we see in the variations of the total CO_2 content or CO_2 combining power, although in some conditions it is a compensating mechanism.

Blood pO_2 is a type of measure of the oxygen saturation of the blood.

General Remarks

It is beyond the scope of this paper to discuss completely the disturbances in fluids and electrolytes. In regard to blood gas studies, we are principally concerned with acid-base balance (an integral part of electrolyte and fluid relationship). We hasten to remind the reader that one obviously should not neglect observing the fluid intake and output, measurements of serum for Na, K, Cl, Ca and P, urinalysis, blood volume determinations, hematocrits and the clinical picture of the patient. But, with the above picture, the experienced physician still may find difficulty in determining the exact therapy needed for the patient with electrolyte imbalance. The additional knowledge of blood gas studies clearly defines the acid-base picture in practically all cases.

The disturbances of acid-base equilibrium are broken down into four categories (metabolic acidosis, respiratory acidosis, metabolic alkalosis and respiratory alkalosis). Each of these evokes compensating responses that tend to minimize the changes in pH, but overcompensation does not occur. The following table shows the variation in pH, pCO_2 and total CO_2. The primary mechanism is noted by "++" or "− −", the resultant pH by A(acid) or B(basic) and the compensating response by "+" or "−".

Summary of Normal Values

	pH	pCO_2	CO_2 content	pO_2
Arterial blood	7.38-7.43	35-45 mm.Hg	24-29 mEq/1	80-100 mm.Hg
Venous blood	7.36-7.41	40-50 mm.Hg	24-31 mEq/1	Less than 50 mm.Hg

	pH	pCO_2	Total CO_2
Metabolic acidosis	A(acid)	−	− −
Respiratory acidosis	A(acid)	++	+
Metabolic alkalosis	B(basic)	+	++
Respiratory alkalosis	B(basic)	− −	−

Metabolic acidosis results from accumulation of fixed acid or from loss of alkali. It may be seen in uremia, diabetes, intoxication (with salicylates, methanol, ethylene glycol and paraldehyde), prolonged or severe diarrhea, renal tubular disease and post-operative states (enterostomy, colostomy, etc.) Treatment consists of administration of lactate or bicarbonate solutions and the therapy of the underlying disease. It should be remembered that the patient may need potassium.

Metabolic alkalosis is caused by loss of fixed acid. The usual causes are excess vomiting, excess nasogastric suction, Cushing's disease, diarrhea (occasionally), hyperaldosteronism, ingestion of alkali and prolonged administration of corticosteroids and diuretics. Treatment consists of correcting the volume depletion, therapy of the underlying disease and administration of isotonic saline. It is again well to remember that the patient may need potassium.

Respiratory acidosis is due to inadequate pulmonary excretion of CO_2, usually associated with a decrease in pO_2. The usual causes are pulmonary disease or intrinsic lung disease (emphysema, bronchitis, asthma, pulmonary infarction, pulmonary fibrosis, pulmonary edema and hyaline membrane disease), oversedation, cerebrovascular accidents, myasthenia gravis, restriction of chest motion and post-operative states (atelectasis, obstruction, etc.). The treatment consists of therapy of the underlying condition and administration of oxygen in concentrations, of not over 40%. If oxygen is given in 100% concentrations, it should not be for any extended period of time.

Respiratory alkalosis is due to hyperventilation. The causes are psychogenic manifestations, hypermetabolism (hyperthyroidism, fever, etc.) and the early stages of salicylate intoxication. The only treatment necessary is usually correction of the underlying disorder.

Notes

1. It is usually suggested that the physician correct acid-base imbalances gradually, and periodically recheck the blood pH and pCO_2.
2. Arterial puncture should be done with a small needle (23), using proper precautions on patients receiving anticoagulants or suffering from some coagulation defect.
3. Any patient in a coma, or who is critically ill with an unsure diagnosis, is a candidate for blood gas studies (pH, pCO_2 and pO_2).

Summary

The value of blood gas studies (pH, pCO_2 and pO_2) is discussed and variations in disease are listed.

A Safe Method of Drying Hands and Forearms after the Surgical Scrub. William H. Prioleau, M. D. Amer J Surg 113:586, 1967.

The common practice of using a different end of the towel to dry each arm may, by wick action, contaminate the hands with water from the elbows. Contamination reaches the wound through perforations in gloves. A safe method is based upon forming the towel into a ball, drying both hands simultaneously, the forearms in turn, and lastly both elbows with the same surface of the towel ball.

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X-RAY FILM OF THE MONTH

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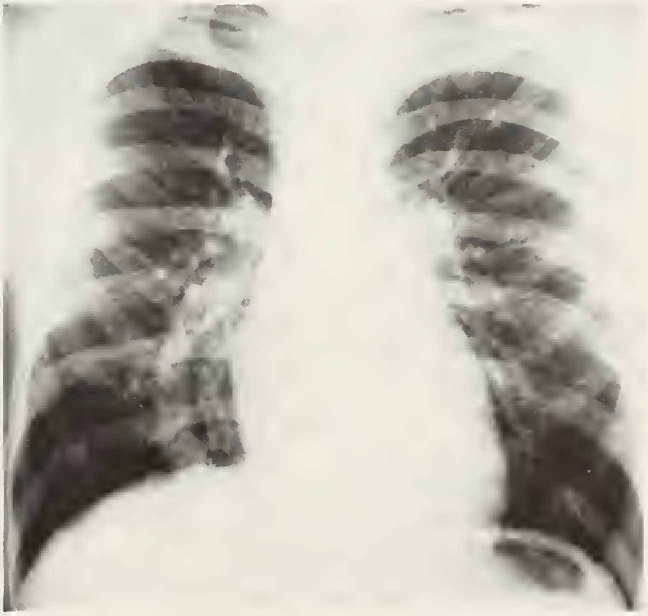
Charleston, S. C.



This PA film of the chest was taken on an active, apparently normally developing, 6 year old white male who, on a routine preschool physical examination, had been noted to have a grade 2 systolic murmur in the pulmonic area. The second pulmonic sound was louder than the second aortic sound and was split. No other abnormalities were noted. On the film, one will note the crescent shaped shadow in the lower half of the right lung field.

This is a case of anomalous partial pulmonary venous connection to the inferior vena cava. The venous return from the right lung, instead of entering the left atrium, collects in a large vein which then passes through the right leaf of the diaphragm and connects with the inferior vena cava. Thus, it represents a left to right shunt.

In the early developmental stages, the primordia of the lung, larynx and tracheo bronchial tree are derived from division of the foregut and share its blood supply. At this stage they have no direct connection with the heart. Even normally, some of these primary connections are maintained i.e. the bronchial veins. The permanent and usual pulmonary venous connections of the lung depend on secondary connections between the heart and capillary plexus in the developing lung. If the secondary connection to the left atrium does not develop, one has total anomalous venous connections, or if only partial, partial anomalous connection. Considerable increase in body growth occurs between the phase of development when the stage is set for anomalous pulmonary venous connection and later phases of development. Thus, as the development of the diaphragm occurs later, it is understandable that these anomalous venous channels to the inferior vena cava may become rather long and pierce the diaphragm to reach their anomalous termination.[1]

There are two forms of anomalous pulmonary venous connection, the total and the partial. While closely related developmentally, they should be considered as two separate and distinct clinical entities. In total anomalous pulmonary venous connection, there are no venous connections with the left atrium, thus the patient can survive only because of a second defect, usually in the atrial septum which allows some oxygenated blood to get into the systemic circulation. Obviously, this is not an efficient type of circulation and the patients rarely survive passed infancy. In contradistinction, those patients with partial anomalous pulmonary venous connection in general do well, reaching adult life and often showing little evidence of disability.

In partial anomalous venous connection to the right side of the heart, the connection most frequently is to the superior vena cava, next in frequency, to the right atrium, and still less frequently next to the innominate vein. Other sites are uncommon and in only 3% of the cases does drainage occur into the inferior vena cava[2] This specific type, however, is of interest because it can often be diagnosed from the plain chest film as was done in this case by recognition of the large crescent shaped draining vein. Other signs to be looked for are a right hemithorax that is smaller than the left, and displacement of the heart to the right. The physical findings are in general as described above. These lesions are surgically correctable.

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1. Edwards. J. E.: Pathologic and developmental considerations in anomalous pulmonary venous connections. Proc Mayo Clin 28:441. 1953.
2. Hardisty, N. M. and Steinberg, I: Anomalous right pulmonary vein entering the inferior vena cava: two cases diagnosed during life by angiocardiography and cardiac catheterization. Amer J Med Sci 218:31, 1949.

50 YEARS AGO

The Journal of the South Carolina Medical Association

June 1917

The Journal presented a discussion of the merits of a draft for physicians. The Association adopted a resolution that volunteer physicians in active service should receive one-third of fees collected from the absent physicians' patients by doctors remaining at home.

Membership of the Association was at its peak with 740 names.

Smallpox had occurred in the previous year in 22 counties of the state.

The Association erected a memorial stone to Dr. W. C. Norwood, of veratrum viride fame.

President's Page

Last month I wrote that the medical profession was the most magnificent the world had ever known (considering the ministry an avocation as contrasted to a profession).

This month I suggest we recognize and pay tribute to a closely affiliated group just as deserving of praise. I refer to those lovely, intelligent, unselfish, longsuffering women who married physicians.

They had to be intelligent and lovely. Lovely, else people as highly trained, as discerning, as discriminating as physicians would not have married them. Intelligent because it was so often necessary to search skillfully beneath the surface of the apparently grumpy, tired, often frustrated physician to find the attractive, dependable, desirable qualities a woman would want.

Surely they were unselfish and longsuffering. They knew they could hope to see only relatively little of their husbands. They knew they would have to be pretty much the head of the household. They knew if their marriage was blessed with children their's would be the major portion of the task of attending to the details of their rearing. They knew hopes for enjoying an orderly life (enjoying together an anticipated vacation, a birthday party or anniversary celebration, etc.) were nil. They knew they would be alone and lonesome much of the time. Surely a selfish woman would not have given second thought to becoming involved in such a marriage.

But they did marry physicians and in addition we find them going the second mile, organized into one of the most helpful, most effective groups of all womens' organizations, i. e., the Womans' Auxiliary. When we physicians need help with a charity "drive," when we need letters written, when there is need for mutual regeneration of the wives' enthusiasm for things medical, the auxiliary is always there. The members lend each other support and courage which in turn they transmit to their husbands. The Auxiliary's activities are many. We are aware of some of them—the student loan fund, the AMA-ERF contributions, their benevolence fund, their mental health, state hospital, and HOPE contributions. By this note in the pages of our Journal let us hope the physicians' wives will at least be reminded that we love them, hold them in the highest esteem, and that we feel no hesitancy in rating them the finest group of wives the world has ever known.

Norman O. Eaddy, M. D.

Editorials

The Annual Meeting

During its annual meeting in May, the Association called for a congressional investigation of the U. S. Department of Health, Education and Welfare describing it as "the spearhead of a conspiracy" to change the country by gradually and deceptively converting it to a socialistic welfare state.

The HEW investigation resolution, introduced by the Charleston County delegates, said it is "suspected" that many of the department's officials over the past several decades "subscribe to the philosophy of socialism and are actively endeavoring to destroy capitalism."

The physicians rejected a resolution by the Charleston County delegates that called for the withdrawal of Blue Shield as the fiscal agent for Part B of Medicare in the state.

The doctors also went on record as urging physicians and hospital staffs to cease signing certification and recertification forms of patients under Medicare. These and other resolutions were voted on by the Association's House of Delegates during the meeting at the Ocean Forest Hotel.

Included among the other resolutions passed by the house of delegates were those that:

—Called for state laws that would legally define the medical indications for abortions in South Carolina.

—Reaffirmed the Association's stand in favor of fluoridation of public water supplies.

—Did not approve certified, registered nurse anesthetists to be included under the Blue Shield payment plan.

—Called for Medicaid to be placed under the State Board of Health.

—Approved in principal the traffic safety bill now before the state legislature.

—Called for a clarification of state laws to make clear that blood transfusions are termed medical services and not commodities.

—Reaffirmed direct billing of patients without assignment under the Medicaid program.

—Opposed congressional attempts to have hospital-based specialists bill their patients under Part A of Medicare nistead of Part B.

Scientific programs were held May 9-10.

Among the guest speakers were Dr. Martin M. Cummings, director of the National Library of Medicine.

The Woman's Auxiliary to the state association held its House of Delegates meeting Wednesday, May 10. Mrs. Leon Banov of Charleston presided.

Mrs. Asher Yaguda of Newark, president of the Woman's Medical Association, was featured speaker at the state auxiliary's membership luncheon at the Pines Lakes International Country Club.

The Charleston News & Courier and WSPA-TV in Spartangurg were given citations for their interest in providing sound health information to the public.

Dr. Norman Eaddy of Sumter was elevated to the presidency of the Association.

Dr. Joel W. Wyman of Anderson was named president-elect.

Dr. Eaddy succeeds Spartanburg's Dr. George Dean Johnson.

Elected vice president of the Association was Dr. Harrison Peeples of Estill.

Re-elected were Dr. Ben N. Miller of Columbia as secretary and Dr. J. Howard Stokes of Florence as treasurer.

Dr. Joseph P. Cain, Jr. of Mullins was re-elected delegate to the American Medical Association and Dr. John C. Hawk, Jr. was named alternate delegate.

Elected councilors were Dr. Waitus Tanner of Columbia, John Gaston of Chester and Dr. J. Harvey Atwill of Orangeburg.

Dr. Eaddy, the new president, has served on Council for six years, including four as chairman.

The 1931 graduate of the Medical College of South Carolina is an eye, ear, nose and throat specialist and is a diplomate of the American Board of Ophthalmology.

Dr. Joel Wyman

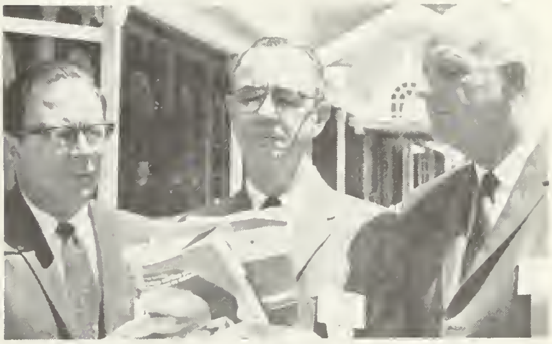
The newly chosen president-elect of the Association, Dr. Joel Wyman was born in Estill, S. C. and was graduated from the University of South Carolina and the Medical College of South Carolina.

He served his internship at McLeod Infirmary, Florence, and practiced medicine in Anderson from 1946-49. In 1949 Dr. Wyman was an assistant resident at Boston City Hospital where he studied dermatology. The following year he was a clinical fellow at Massachusetts General Hospital and in 1951 a fellow at Duke University Hospital.

A staff member of Anderson Memorial Hospital, Dr. Wyman has been practicing dermatology in Anderson since 1952. He became a certified board member of the American Board of Dermatology in 1953.

Dr. Wyman is a member of the Anderson County Medical Association, the American Medical Association, a fellow of the American Academy of Dermatology and a member of the Southern Medical Association.

He is a past president of the Anderson County Medical Society, state chairman of SCALPEL for two years, state chairman of AMA-ERF for two years, chairman of the Credentials Committee for two years and has also served on numerous other committees.



MEDICAL ASSOCIATION OFFICERS
Dr. Harrison Peeples of Estill (left) vice presiden; Dr. Norman O. Eaddy of Sumter president, and Dr. Joel W. Wyman of Anderson, president-elect. (Photo by Plyler)

Council Elects Officers

At the end of the meeting Council held its final session and re-elected Dr. William Perry chairman and Dr. Martin Teague vice chairman and elected Dr. Harvey Atwill clerk of council.

Council was requested by the House to submit a plan for staggering the terms of the members of the Executive Committee of the State Board of Health.

In the House of Delegates a resolution opposing the Hart bill was passed.

Each member was urged to make a voluntary contribution of $10 a year to the Benevolence Fund.

Certain minor amendments to the Constitution were made and will appear in the minutes. A new amendment to include only the five most immediate past presidents as members of the House of Delegates was put on the table until the next annual meeting. The measure aimed at accomplishing redistricting of the Council members was lost.

Myrtle Beach was selected as the meeting place for 1968, tentatively May 13-15.

MEDICAL COLLEGE OF SOUTH CAROLINA

Gov. Robert E. McNair delivered the principal address at the 140th Commencement Exercises of the Medical College of South Carolina on June 1 at The Citadel Armory.

Eighty candidates were presented for the M. D. degree. Presented were 11 B. S. degrees in Pharmacy, four Master of Science degrees, and four Doctor of Philosophy degrees. Forty-three diplomas in Graduate Nursing were scheduled to be given.

Four faculty members from the Medical College presented papers at the 51st annual meeting of the Federation of American Societies for Experimental Biology in Chicago.

Drs. Richard W. Hanckel and F. Johnson Putney presented two papers each to the Virginia Society of Ophthalmology and Otolaryngology April 27-29.

Dr. Dale Groom has been invited to membership on the Committee on Continuing Medical Education of the AMA for 1967.

Dr. Curtis P. Artz spoke before the American College of Surgeons in White Sulphur Springs, Va., on "The Treatment and Management of Burns."

Dr. Max Rittenbury spoke before the University of Kentucky Postgraduate Surgical Seminar on April 4 on "Current Concepts of Burn Management."

Dr. Henry B. Gregorie, Jr. is going to Viet Nam for May and June as a member of Volunteer Physicians for Viet Nam.

Dr. Kelly T. McKee has been appointed Interim Chairman of the Dept. of Medicine, effective May 1. He succeeds Dr. John A. Boone who has resigned as department chairman. Dr. Boone will remain as a Professor of Medicine.

Doctors In The News

Dr. W. R. Sims of Rock Hill was honored recently for his 25 years as president of the York General Hospital board of trustees. **Dr. Thomas Brockman,** Greenville alderman, offered for renomination in a recent Democratic primary. **Dr. Charles R. May, III** of Bennettsville has been elected to active membership in the American Academy of General Practice. **Dr. George R. Cousar, Jr.** has opened his office at 606 Pendleton St. for the practice of ophthalmology, according to the Greenville County Medical Society. He was graduated from Davidson College with a B.S. and received his master's degree from the Duke University School of Medicine. He completed his residency in ophthalmology at the Duke University Medical Center. **Dr. Harvey E. McConnell,** Lancaster surgeon, was installed recently as a member of the Erskine College Board of Counselors. **Dr. J. E. Crosland,** a general practitioner for the past 26 years in the Greenville area, has published his first book, entitled "The Golden Twenty-Six Years." He retired May 1. **Dr. Rex Dillingham** and **Dr. John Willis** have announced a partnership for the practice of general medicine in Lancaster. Their office is located at 307-9 South Catawba Street. **Dr. Frank J. Wyman, Jr.,** Columbia obstetrician and gynecologist; **Robert F. Hagerty, M. D.,** and **Willis K. Mylin, D. D. S.,** directors of the cleft lip and cleft palate center at the Medical College, participated in a young adult leadership conference on birth defects April 29 in Columbia. **Dr. Wyman** has joined **Drs. Heyward H. Fouche** and **M. Tucker Laffitte, Jr.** in the practice of obstetrics and gynecology at 1812 Hampton St., Columbia. **Dr. E. Reynolds Young** of Due West is returning to Pakistan as a surgeon. He served there as a medical missionary.

Dr. Carter P. Maguire of Charleston was elected president-elect of the Southeastern Society of Plastic and Reconstructive Surgeons at the Society's recent convention at Grand Bahama Island. **Dr. William W. Bowen** has been honored as the "Outstanding Civitan of 1966-67" by the Hartsville Civitan Club. **Dr. Harrison Peeples** recently attended the State Officer's Conference of the American Academy of General Practice. **Dr. Philip L. Leatherwood** of Lake City recently attended the 38th Annual Aerospace Medical Association meeting in Washington. Dr. Leatherwood serves at Carswell AFB, Texas, as a physiological training officer. Byerly Hospital in Hartsville has made **Dr. William J. Beasley** a lifetime honorary member of its medical staff. **Dr. Carl Alexander Green,** chief of ophthalmology at the VA Hospital in Tuskegee, Alabama, has been appointed associate chief of staff. A native of Orangeburg, Dr. Green will continue to work as chief of ophthalmology. **Dr. Frank P. Espey,** Greenville neurosurgeon, has become president of the Association of Surgeons of the Southern Railway System. **Dr. Frank F. Thompson, Jr.**, a native of Lumpkin, Ga., has joined the medical staff at Whitten Village. **Dr. William Wyman King, Jr.** of Newberry has been elected to active membership in the American Academy of General Practice. **Capt. Harold W. Gowdy, Jr.**, chief of Air Force Clinics, who was assigned to the 3545th USAF Hospital, Camp Goodfellow, San Angelo, Texas, will return to begin the practice of medicine in Bennettsville.

News

The appointment of Dr. Judith S. Hood as assistant director of the Maternal and Child Health Division has been announced by Dr. Hilla Sheriff, director of that Division.

Dr. Hood has been director of School Health and has also been director of Maternal Infant, and Preschool Services at the Kentucky State Board of Health. She has been county health officer in several counties in Kentucky, having been in public health work since 1953.

She grew up in Georgetown, Kentucky, and attended Georgetown College. She received the M. D. degree from the University of Louisville and the M. P. H. degree from the University of North Carolina.

Seminar

The 17th Annual Postgraduate Obstetric-Pediatric Seminar which is sponsored by the Maternal and Child Health Divisions of the State Health Departments and the Maternal Health Committees of the State Medical Associations of Georgia, Florida, Alabama, Mississippi, Tennessee and South Carolina is scheduled to be held August 17, 18, 19, 1967, at the Daytona Plaza Hotel, Daytona Beach, Florida. The Seminar is approved for credit 12 hours, Category I, by the American Academy of General Practice. There is no Seminar registration fee.

The Sixth Annual Southwide Lawyers and Physicians Conference will be held at Lake Junaluska, N. C. August 9-13. For information write Lawyers and Physicians Conference, Post Office Box 67, Lake Junaluska, N. C. 28745.

State Board of Health

After a long and faithful service as Chairman of the Executive Committee of the State Board of Health, Dr. W. R. Wallace has retired as chairman, but continues as a member of the Board. Dr. W. Wyman King of Batesburg has been elected in his place.

A NEW ERA FOR THE NURSING HOME

ELISABETH M. ALFORD

South Carolina Hospital Association

The American health care system today is characterized by almost constant change. Because of the rapid growth and progress of the health field in this decade, new trends in the organization, scope and distribution of health services can reach stages of full development before they have been given a name, or some conceptual form of identification. The new era of nursing home services is an excellent case in point. Not until the term "extended care" was used in the text of the Health Insurance for the Aged Act did anyone take much notice of the fact that a new trend in the use of nursing homes had been developing for several years. In fact, the general public was little aware of the recent rapid growth of the nursing home industry and of the changes in the quality and range of nursing home services which had occurred.

The public apathy about nursing homes so prevalent a few years ago is not difficult to analyze. The nursing home, until just recently, was the least significant element in the American health care system. It was the least significant numerically, its services were frequently more of the nature of personal care, rather than of medical care, and generally, nursing homes were the least visible of all health care institutions. They were isolated from the mainstream of medical services, because they were often constructed miles away from the community hospital, or from the center of town. The assumption was that older people preferred the peace and quiet of a country setting. Today, nursing homes are being built adjacent to hospitals or on busy thoroughfares, for convenience and because gerontologists have learned that the aged prefer to be near activity, even if they cannot participate in it.

In addition to their greater visibility, nursing homes are rapidly becoming more numerous and may soon become the largest group of institutions providing health care services. In the past ten years, the number of nursing home beds in the nation has more than doubled. Increasing far more rapidly than hospitals, the nursing home industry in South Carolina grew by 620 new beds in the year ending December, 1966. In the same period, the number of general hospital beds in South Carolina decreased by ten beds, from 8892 to 8882. The latest report from the State Board of Health shows a total of 4000 nursing home beds in the state, and several new nursing homes have been opened since the last official count.

While the enactment of Medicare has focused attention on the nursing home, or on the extended care facility, contrary to public opinion, the new program has probably contributed very little to the recent growth of the industry. The expansion of nursing homes began several years before the advent of Health Insurance for the Aged. Many factors, most of them sociological in nature, contributed to the burgeoning of the nursing home field. The increase in the number of elderly persons in the youth-oriented American society brought about pressures for more socially acceptable and convenient care of the chronically ill aged than that which could be provided at home by the second generation. Everything from the increasing number of working women and the concomitant disappearance of the housewife, to the construction styles of modern houses and apartments, has combined to make the nursing home a more desirable alternative for long term care of the chronically ill than the care of the patient by other family members at home. (Home nursing services, another new development in long-term care, provide another alternative, but only when family members are able to assist in the patient's care or when the patient is not ill enough to require continuing observation or care.)

Increasing admissions to nursing homes have also resulted from the development of the new concept of progressive patient care which gears the services and facilities to the patient's needs. It has been accurately reasoned that the convalescent patient does not generally need the expensive, highly specialized services of the acute general hospital. General hospitals in many areas have experienced bed shortages for years and have been able to make more efficient use of all existing beds by transferring convalescent patients to nursing homes whenever appropriate.

A number of hospitals in South Carolina have constructed nursing homes or extended care units to help relieve crowded conditions, as well as to expand the range of services provided to the community. A sizeable factor in the overcrowding of hospitals has been the average length of stay of the patient over 65, which is five or six days longer than the overall average. Before the construction of new extended care facilities, and the recent development of transfer or affiliation agreements between hospitals and nursing homes, a majority of the elderly hospital patients remained in the hospital during the convalescence period, because they required more care than could be provided at home, even though they no longer required hospital services for acute illness. The extended care portion of the Medicare program was designed to provide this type of convalescent care for the post-acute illness of elderly patients, rather than chronic care, as so many believe. One may safely guess that the economy of extended care, compared to hospital care, weighed heavily in the decision to include these benefits in the program, since Medicare was not designed to pay for long term care of the chronically ill.

Since the average per diem cost of nursing home care is from one-third to one-half the cost of hospital care, transfers from the hospital to the long term unit have been generally acceptable to patients and families. Moreover, elderly patients appear to prefer the nursing home environment, with its more relaxed and sociable atmosphere. The transfer of patients, insofar as it has been possible and practical to accomplish, has proved beneficial in controlling unnecessary utilization of general hospitals for the elderly and the convalescent patient. It has at the same time contributed to a growing shortage of nursing home beds in some areas. According to the most recent State Plan for Construction and Modernization of Hospitals and Medical Facilities in South Carolina, eleven counties have no nursing home beds at all and the state still needs 1500 new long-term care beds. Further, 500 of the existing beds do not conform to standards and require modernization. While it is true that increased use of nursing homes for convalescent patients has helped to ease the hospital bed shortage only by creating a shortage of nursing home beds, the exchange has still been an improvement. Nursing home bed space can be built for approximately $14,000 per unit, compared to $30,000 to$35,000 required for provision of each new hospital bed. The relative need for additional hospital beds in South Carolina is greater than the need for more long-term care beds. The State Plan indicates that 62 per cent of the state's overall need for general hospital beds has been met and 71 per cent of the need for long term care beds has been met.

Although there is a statewide shortage of nursing home beds, vacancies do exist. Some are the natural result of regional variations in relative need and supply of beds. Some homes, however, have empty beds because they will not accept Welfare patients, or will permit only a certain proportion of their total beds to be occupied by Welfare patients at any time. Other homes have vacancies as a result of admission policies which allow only for the acceptance of patients whose prognoses indicate fairly rapid recovery and discharge, as opposed to the chronically ill, who may never be discharged. These homes are almost entirely brand new units, designed to accommodate to the patient requiring extended care, as defined in the Medicare Act. In the past, nursing home patients have been predominantly the chronically ill, and prior to the implementation of the extended care portion of Medicare, there was a relatively small demand for nursing home beds for care of the patient who was not chronically ill. It will probably be several months before maximum usage of the extended care benefits under Medicare occurs, introducing larger numbers of convalescent patients into the nursing home population. When this happens, nursing homes geared exclusively to the care of the convalescent and other extended care cases will have few, if any, vacancies.

Nursing homes which do not accept Welfare patients will probably continue to have vacancies. Since private patients constitute a minority of nursing home patients, the private homes are catering to a rather limited market. It is not reasonable to assume that the number of persons who can afford nursing home care for an indefinite length of time will increase very much in the near future, and since Medicare does not cover indefinite stays in nursing homes for the chronically ill, low occupancy may continue to be a problem in the all-private home, in spite of the growing shortage of beds. The all-private home has had valid reasons for excluding Welfare patients. Current Welfare payments to nursing homes are less than the actual cost of providing care.

Just as patients and families have mistakenly assumed that Medicare would solve the individual's problems of financing long-term care in nursing homes, the public has mistakenly assumed that Medicare would solve some of the present financial problems of nursing homes. The misunderstanding has its origin in the fact that some 45,000 of the state's 80,000 medically indigent aged are now entitled to Medicare benefits. Unfortunately, very few of the indigent who are now covered by Medicare can qualify for the extended care benefits. A great majority of them are chronically ill and have been in nursing homes since before June 30, 1966. A chronically ill person in a nursing home, approved for Medicare participation, can qualify for extended care benefits only if he was discharged from a general hospital following at least a three day stay, after June 30, 1966, and was admitted to the extended care institution within 14 days after discharge for further treatment of the condition for which hospitalized. The few who will qualify for extended care benefits will represent a very small percentage of the total number of nursing home patients. In addition, the extended care benefits are of relatively short duration, and, in many cases, will be exhausted before the patient is ready for discharge. Consequently, Medicare payments for extended care will cover such a small proportion of a home's total operating expense that they will have a negligible effect on the overall financial problems of the long term care institution.

The current financial problems of nursing homes are critical. During 1966, nursing homes were paid $175 per month by the Welfare Department for care of sponsored patients, and were allowed to collect up to $50 per month from the patient's family, a total payment of $225 per month. Even if the home was successful in collecting from the family, the $225 did not cover the actual cost of care in most homes. The average per diem cost in 1966 was $8.44, or $253 per month. Nursing home costs soared in February, 1967, due to the amendments to the Federal Wage and Hour Law which required nursing homes to pay a minimum wage of $1.00 per hour. The total impact of the minimum wage in nursing homes has yet to be calculated, but it is estimated that it will cause nursing home costs to increase a minimum of 15% in 1967, and will bring about further increases each year until the minimum wage reaches its scheduled maximum of $1.60 per hour in 1971.

In some ways, Medicare has compounded the financial problems of nursing homes. The program's Conditions of Participation include a number of rather expensive requirements, such as the employment of dietary and pharmacy consultants. These requirements have produced improvements in patient care, but they also added to operating costs. It is ironical that a program which will provide reimbursement for only a minor portion of the total number of days of patient care provided by nursing homes has caused the cost of all days of care to increase. Since there has been no improvement in nursing home reimbursement from the state Welfare Department, which purchases a majority of nursing home days of care in South Carolina, the gap between operating expense and income continues to widen. The South Carolina Association of Nursing Homes has been actively seeking to have Welfare payments to nursing homes increased. The success of their efforts may well determine the future of the nursing home industry in the state.

Assuming that financial problems are alleviated, if not completely solved, the nursing home's future growth is also contingent upon improved public and professional acceptance of the institution and its unique role in comprehensive patient care. A number of authorities in the field have attributed the nursing homes' rather poor public image, and the fact that they have not been fully accepted as an essential element in the health care system, to the absence of an organized medical staff or some other formalized arrangement for medical supervision of the nursing homes' program of care. Medicare requirements, calling for an advisory physician and a utilization review committee for the home and for transfer agreements with general hospitals, will help to bring about public recognition of the nursing home as an institution providing a medical service, rather than as a custodial institution.

It will require considerably more time and public education to dispel the popular notion that the nursing home exists exclusively for the care of the aged. Although the aged probably will always represent the majority of nursing home patients, nursing homes of the present era have been designed, constructed and organized to serve patients requiring a certain level of care, rather than a given age group. Types of patients who might appropriately be admitted to a nursing home, according to a recent publication of the American Hospital Association, include those with potentially recurrent diseases, such as bronchial asthma or congestive heart failure, who need careful observation; patients with potentially progressive disease, such as diabetes mellitus, who need careful observation and supervision while learning to give themselves medications; patients with static handicaps, such as those resulting from amputation or stroke, who are in the rehabilitation process; and patients whose convalescence is prolonged, including older patients, postcoronary patients, and postsurgical patients for whom muscle retraining is necessary.[1]

There are definite advantages to treating such patients in the nursing home, rather than in the general hospital, in addition to the economy involved. Rehabilitation nursing is standard in almost all nursing homes in the state, as a result of a continuing series of education programs in this specialty, conducted by the State Board of Health over the past several years for nursing home personnel. The relaxed pace of the nursing home makes it possible for the staff to provide more individualized attention to patients and to carry out an extended program of rehabilitation, or patient education. Visiting hours in nursing homes are unrestricted, allowing patients to keep in closer touch with families and friends than in the hospital. Recreation and social activities are part of the daily schedule in most homes, because modern day nursing home philosophy includes these as a positive part of the program of care, which has as its ultimate goal, returning the patient to optimum use of all his remaining faculties.

The nursing home now offers a combination of services which, though largely developed to meet the needs of the chronically ill aged, are suitable for restoration and convalescent care of patients of all ages. As the acceptance of the nursing home is strengthened and as the public becomes more aware of the variety of services offered by the institution, the demand for nursing home beds will increase substantially. The increasing number of elderly persons in our society will add greatly to this demand. The interest of state and federal governments in providing appropriate care for sponsored patients at the most economical cost, and the interest of prepayment plans and commercial insurance in providing a package of comprehensive medical care benefits within the purchasing power of the average citizen, will encourage the most appropriate use of health care institutions of all kinds, including the nursing home. As these trends continue, nursing home services will inevitably be broadened to meet changing and growing demands. Nursing homes have already demonstrated a remarkable degree of adaptability and flexibility in their efforts to meet the standards for participation for Medicare over a short period of time. Future demands for expanded services for conditions other than the acute will probably be met with equal speed and satisfaction by the nursing home industry, provided, of course, that personnel and funds to support the services are available. In view of this demonstrated willingness to adapt to changing requirements and concepts in long term care, it is safe to predict that the nursing home will continue in its further development as a widely used, necessary health care institution. Over the next ten years, nursing homes will probably become standardized, both in terms of services offered and in relationships to other elements in the health care system. Throughout the developmental stages, the physician can play a vital role in shaping this relatively new institution into one that ideally suits the needs of long-term or extended care patients, by his support of nursing homes' efforts to improve services, by familiarizing himself with the range of services offered by homes within his area, and by suggesting additional services which would improve the overall program of care.

REFERENCE

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Interactions of humoral antibodies and immune lymphocytes. P. Hutchin, D. B. Amos, and W. H. Prioleau, Jr. Transplantation, 5:68, 1967. (from the Division of Immunology, Department of Microbiology and Immunology, Duke University Medical Center.)

The growth rate of transplanted mouse tumors may be accelerated or diminished by varying 1) the quantity of added antiserum, and 2) the time interval between immunization and the harvesting of added lymphocytes.

Comprehensive Health Care Services

E. KENNETH AYCOCK, M. D., M. P. H.
STATE HEALTH OFFICER

We have witnessed within the past two years more widespread legislation in the health field than ever before in the history of our country. Title XVIII, Medicare, and Title XIX, Medicaid (Public Law 89-97, an amendment to the Social Security Act) are outstanding examples.

But another piece of legislation, the Comprehensive Health Planning Act (Public Law 89-749) may have a more profound impact upon the delivering of health services for future years, since this Act provides us with the opportunity to plan a blueprint or framework in which to coordinate all existing health programs into more meaningful comprehensive services. This planning will encompass health manpower, health facilities, and all health services furnished by both public and private agencies or persons such as physicians, hospitals, schools for nursing, welfare health programs, health departments, etc., but without interference with existing patterns of private professional practice of medicine, dentistry, and related healing arts.

Governor McNair has appointed the State Board of Health as the single agency to draw up such a plan of health services.

All of this is prologue to focus our attention on a fact of which we are all very much aware. We are facing a revolution in medical care, and we must plan for it. Our knowledge, skills, facilities, services, and professional education programs must be re-examined in the light of high professional standards of medical care and then welded into a more efficient system. The weapons of the last war will not suffice to meet the new challenges of delivering total health services to all people, so let us, therefore, look into the future to determine what weapons we must forge.

The fact of rapid change must not dismay us. It will provide unparalleled opportunities to bring the fruits of medical science into practical application. We have the opportunity to tailor our health service programs to meet our specific needs.

The many pressures impinging on all of us are well known to all of you: foremost among them, a population rapidly increasing, particularly at the extremes of life where medical care is needed most. There is a pressing need for more physicians, research workers, nurses, and other ancillary medical personnel.

Every citizen is entitled to the benefits of any scientific fact, professional skill, or health resource that could prevent or treat disease or disability, or prevent untimely death. Health is a right. It is the duty of the State Board of Health to assist the citizens of this State to secure those health services which they cannot secure unaided.

So much of what is known of the cause and nature of illness and so many of the professionals prepared to serve the people are the result of funds invested in research and training by the people through their county, state, and federal government that the benefits to be derived can be considered public domain, for the funds were appropriated in the first place because their expenditure was in the public interest.

A state of health is in the public interest, since a healthy population is, all things being in proportion, a vigorous, creative, and dy-

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Presented at the Meeting of County Medical Society Officers, Columbia, S. C. 1967.

namic population. Therefore, for its own sake, it is important that a government assure the healthiest possible citizenry.

The public's active concern for the health of its people and its active intervention to preserve or restore health goes back a long way. While originally the objective of these efforts was to prevent the spread of disease from the sick to the well, government's responsibility of isolation of the sick later was augmented by the establishment of programs to prevent or render noninfectious these suffering from certain communicable diseases. Thus were developed immunization and treatment programs for smallpox, diphtheria, the tuberculous, and those infected with venereal disease.

Concern for the proper care of these people developed an awareness of the shortage of treatment facilities in this country. Thus it was a natural development that legislation for hospital construction came into being.

All the while, medical knowledge was increasing at an ever-accelerating pace. There was concern that the new knowledge be communicated to practitioners as quickly as possible and that there be enough skilled, up-to-date practitioners to utilize the new knowledge. Thus there developed programs for training physicians, nurses, and other health personnel.

There remained one obstacle to the full opportunity of citizens to achieve the right of health. This was the adequate financing of health programs for those unable to carry the burden of prolonged or catastrophic illness unassisted. This need has been met in part by recent legislation.

Optimal health service for every community is a goal of your South Carolina Medical Association and of the State Board of Health. The kind of health service toward which this goal aims must be comprehensive, and it must be personal—the private M. D. is the keystone of any health system. It starts in the relationship of a personal physician to his patient. Any health system augmented with public funds must support and supplement the patient-physician relationship with a team drawn from all the health professions working under the supervision and guidance of a physician.

Each of us needs continuing health services, beginning before birth and lasting throughout our lives. Health services should be brought to bear on the person when he is well, from the moment of birth, and the efforts of that service should be concentrated on keeping him healthy as well as on treating him when ill. This is the concept behind the use of the word "comprehensive." Communities by deliberate planning must develop patterns of quality comprehensive health services and assure their availability, accessibility, and acceptability to all. This comprehensive approach to health would consider the health needs of all age groups and would offer a full range of services from the promotion of health to rehabilitation after illness. Early diagnosis and treatment of illness and systematic follow-up aimed at restoring the patient to the fullest life possible are basic to this concept.

To make the concept work, the community would need access to a wide range of facilities and services. Besides the hospital and physician's office, the community needs such resources as nursing homes and coordinated home care programs, and other medical services or public health programs carried on in the community, such as health education programs aimed at all levels of life, family planning, effective programs for school, mental, dental, and industrial health, and specific programs aimed at the control of communicable diseases in which there must be legal restrictions placed upon the activities of recalcitrant patients. What we are saying is, and I am sure that all of you concur, that public health programs can and must augment the services provided by private physicians in order that we achieve the optimal level of health in the community—for health is not just the absence of disease, but a state of physical, mental, and social well-being.

The achievement of goals thus envisioned will call for broad community planning. The range of kinds and quality of services for which all communities can strive are increasingly clear. Many services should be available to the patient in his own home. As needed, they should also be available in physicians' offices, in outpatient clinics, in hospitals, and in facilities for extended care. They should be rounded out by an organized plan for home care for post-hospital patients and for those who do not need hospitalization, by rehabilitative services for the disabled and by mental health services that are fully integrated with all the other services of the community. All persons of the community must be knowledgeable of the health system, and all persons of the community must have some understanding of how easily and readily they can *get into* the health system, thereby receiving the health service which they need and thereby receiving the health care at the earliest, the optimal time.

Medical care is usually requested and delivered today in an atmosphere of sporadic bursts of concentrated attention, rather than a continuing, lifelong program of health maintenance. Attitudes toward medical care and traditional concepts of medical practice have created this situation. Changes will be intimately related to the removal of barriers to the use of health services by all persons, to the development of an increasingly well-informed citizenry, and to the extension of health insurance and other prepayment plans. The essentialness of continuity is fully established in fields such as infant care and maternity care, but needs to be extended to cover the entire range of patient care.

There is much fragmentation within the health system and within and among the professions. To make it possible for the individual to have easy access to health care and to facilitate coordinated, continuing health care in a comprehensive services pattern, every individual should have a personal physician who is the central point for integration and continuity of all medical and medically related services for his patient. Such a physician will emphasize the practice of preventive medicine, through his own efforts and in partnership with the health and social resources of the community.

The physician should be aware of the many and varied social, emotional, and environmental factors that influence the health of his patient and his patient's family. He will either render, or direct the patient to, whatever services best suit his needs. His concern will be for the patient as a whole, and his relationship with the patient must be a continuing one. In order to carry out his coordinating role, it is essential that all pertinent health information be channeled through him regardless of what institution, agency, or individual renders the service. He will have knowledge of the access to all health resources of the community—social, preventive, diagnostic, therapeutic, and rehabilitative—and will mobilize them for his patient.

The concept of the personal physician relates to an approach to the over-all needs of the patient, and all arrangements for organizing or delivering personal health services should be based on a firm and continuing relationship between the individual patient and his personal physician. This concept places deliberate and necessary emphasis on the fact that all individuals—all families—should have access to a physician who is willing to accept responsibility as the central source for preventive health service and continuing care. There may be a substantial reorientation of medical education for the development of adequate numbers of personal physicians.

In order to make full use of the limited physician manpower, health care functions not requiring medical training should be delegated by the physician to other members of the health care team to the maximum extent practical. George Dean Johnson, our president of the South Carolina Medical Association, in his president's page in February urged physicians to make optimum use of available paramedical personnel. The use of paramedical personnel does not lower standards of medical care but improves standards of medical care if the paramedical care is rendered under the supervision and guidance of physicians.

The time is ripe for organized individual care, including physician visits, clinic visits, hospital care, extended care facilities, home health care, rehabilitation, care of the mentally ill, and dentistry to become integrated with the whole of comprehensive personal health services. Today, a dynamic, new approach to community-based prevention, treatment, and control of environmental health hazards, physical disabilities, emotional disturbance, and mental illness is bringing specialization of health services back into the mainstream of providing health services aimed at total health needs through comprehensive health planning.

Now, let me make 12 points. The role of the community planning agency for health—no matter how one defines community—is:

1. To determine the needs for health.

2. To examine the alternate solutions available to be brought to bear on the needs.

3. To select the one solution that in a given case is determined to be the best for the physical, social, and financial well-being of those to be served, taking into consideration also the needs of those who provide the service.

4. To see that all available health resources (manpower and financial assistance through existing medical care programs, including Title XIX) are brought to bear in whichever way each can do maximum good, and whereby each gives way to greater maximum good than can be accomplished by another; that is, the proper melding of services and facilities to fit the needs.

5. To be comprehensive in its planning and to involve all pertinent segments of the community in studying the needs and in seeking the best available solution for the needs.

6. To consider the problem not in the abstract but, rather, in the light of all known forces and influences that affect both the problem and the solution at any particular time, in a particular geographical area. To start where the community is, using whatever is available, and with the knowledge of the strength and limitations of the community factors, including both voluntary and governmental efforts.

7. To realize that no one group of professionals or consumers alone have all the

Tandearil®
oxyphenbutazone

Therapeutic Effects: Tandearil is a nonhormonal compound which may rapidly resolve inflammation and help restore normal joint function. Its action does not affect pituitary-adrenal function or impair immune responses. Its value in osteoarthritis is especially noteworthy because this disorder responds inconsistently to steroids and is often resistant to salicylates. Further, indomethacin is limited only to osteoarthritis of the hip, whereas oxyphenbutazone is effective in all forms of the disease.

Contraindications: Edema; danger of cardiac decompensation; history or symptoms of peptic ulcer; renal, hepatic or cardiac damage; history of drug allergy; history of blood dyscrasia. The drug should not be given when the patient is senile or when other potent drugs are given concurrently.

Warning: If coumarin-type anticoagulants are given simultaneously, watch for excessive increase in prothrombin time. Pyrazole compounds may potentiate the pharmacologic action of sulfonylurea, sulfonamide-type agents and insulin. Carefully observe patients receiving such therapy. Use with great caution in the first trimester of pregnancy.

Precautions: Obtain a detailed history and a complete physical and laboratory examination, including a blood count. The patient should be closely supervised and should be warned to report immediately fever, sore throat, or mouth lesions (symptoms of blood dyscrasia); sudden weight gain (water retention); skin reactions; black or tarry stools or other evidence of intestinal hemorrhage. Make regular blood counts. Discontinue the drug and institute countermeasures if the white count changes significantly, granulocytes decrease, or immature forms appear. Use greater care in the elderly and in hypertensives.

Adverse Reactions: The most common are nausea, edema and drug rash. The drug has been associated with peptic ulcer and may reactivate a latent peptic ulcer. Infrequently, agranulocytosis, or a generalized allergic reaction may occur and require withdrawal of medication. Stomatitis, salivary gland enlargement, vomiting, vertigo and languor may occur. Leukemia and leukemoid reactions have been reported but cannot definitely be attributed to the drug. Thrombocytopenic purpura and aplastic anemia may occur. Confusional states, agitation, headache, blurred vision, optic neuritis and transient hearing loss have been reported, as have hyperglycemia, hepatitis, jaundice, and several cases of anuria and hematuria. With long-term use, reversible thyroid hyperplasia may occur infrequently. Moderate lowering of the red cell count due to hemodilution may occur.

Dosage in Osteoarthritis: The initial daily dosage in adults is 300-600 mg. in divided daily doses. When improvement occurs, dosage should be decreased to the minimum effective level; this should not exceed 400 mg. daily, and is often achieved with only 100-200 mg. daily.

For complete details, please refer to full prescribing information. 6562-VI(B)R

Availability: Tablets of 100 mg.

Geigy
Geigy Pharmaceuticals
Division of Geigy Chemical Corporation
Ardsley, New York

Geigy

Tandearil®
oxyphenbutazone

helps osteoarthritic joints move again

	3 out of 4 osteoarthritics completely or markedly improved
Sperling, I.L.: 3 Years' Experience with Oxyphenbutazone in the Treatment of Rheumatic Disorders, Applied Therapeutics 6:117, 1964.	76.9% of 407 patients
Watts, T.W., Jr.: Treatment of Rheumatoid Disorders with Oxyphenbutazone, Clin. Med. 73:65, 1966.	84.6% of 39 patients

Please see adjoining page for brief prescribing summary

TA-4919 PC

Why these 7 patients with moderate to severe anxiety may respond better to Mellaril

1. The agitated patient.
Anxiety—particularly that beyond the range of minor tranquilizers—frequently is expressed as gross motor restlessness, fidgetiness and purposeless movements, and may erupt into aggressive behavior. Mellaril is almost a specific for those patients whose anxiety follows such a pattern.

2. The psychosomatic patient.

The family physician is rarely given the diagnostic luxury of a classic, textbook "anxiety state." Most often he must probe for anxiety masked by a functional disorder—or which exacerbates a somatic problem. Double-blind evaluations have demonstrated that Mellaril can be a significant adjunct in the treatment of such patients.

3. The patient under situational stress.

Mellaril helps the patient deal with stresses of everyday life. Nonhabituating, it can be given for extended periods of time. It does not "separate" the patient from practical problems and pressures, does not induce euphoria or a fuzziness which can compromise the ability to cope with realities. Rather, it helps the patient move more competently in his daily world by eliminating useless tension, by allowing him to conserve emotional resources and energies, and to direct them against the problems really worth worrying about.

4. The menopausal patient.

The woman who sees change of life as the end of useful life requires support from both family and family physician. Whether the psychological impact of menopause is directly related to hormonal changes, or merely coincidental, is debatable, but estrogenic therapy is frequently inadequate. Mellaril is a useful aid for these patients and, alone, or in combination with reduced estrogen dosage, will help ease the menopausal misery.

5. The previously hospitalized psychiatric patient.

Such a patient may still require the type of medication he has been accustomed to, but because he is no longer in a controlled setting the acceptable level of adverse reactions must be lower. In such circumstances Mellaril is perhaps the drug of choice.

6. The agitated geriatric.

Tranquilizer therapy in the elderly patient always involves special (or at least accentuated) problems: the possibility of drug-induced ataxia, hypotension or depression, for example, assumes an additional significance. These reactions have rarely been observed in geriatric patients treated with Mellaril.

7. The constantly returning patient.

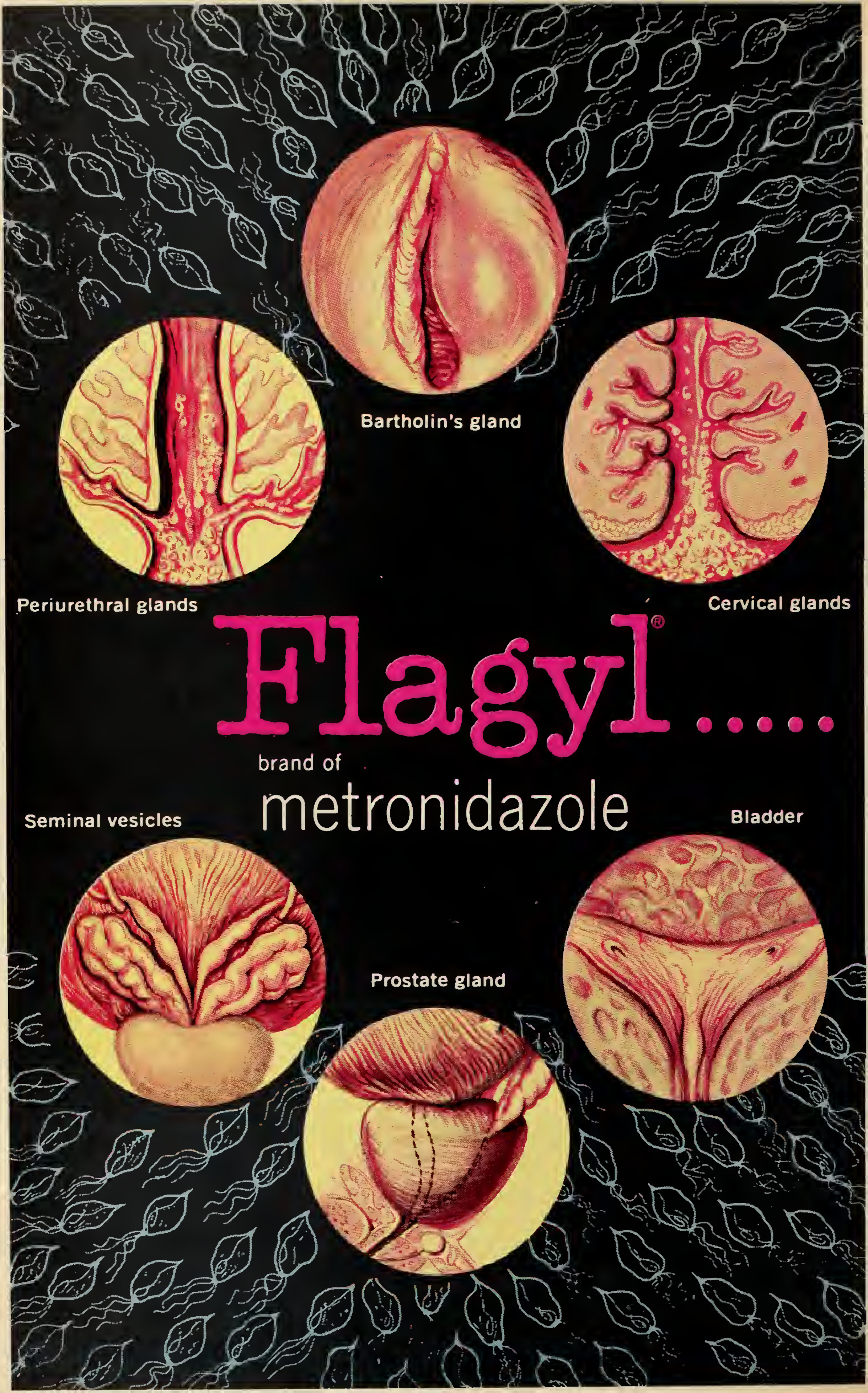
The anxiety patient who has not responded to a minor tranquilizer is not very likely to benefit from your minor tranquilizer of second choice. A major tranquilizer, such as Mellaril, may be indicated in such patients.

Contraindications: Severely depressed or comatose states from any cause, and in association with or following MAO inhibitors; severe hypertensive or hypotensive heart disease.
Precautions: Hypersensitivity reactions (e.g., leukopenia, agranulocytosis) and convulsive seizures are infrequent. Pigmentary retinopathy has been observed where doses in excess of those recommended were used for long periods of time. May potentiate central nervous system depressants, atropine, and phosphorus insecticides. Where complete mental alertness is required, administer the drug cautiously and increase dosage gradually. In addition, orthostatic hypotension (especially in female patients) has been observed. Epinephrine should be avoided in treatment of drug-induced hypotension.
Side Effects: Pseudoparkinsonism and other extrapyramidal disorders are infrequent; drowsiness, especially in high doses early in treatment, may occur; nocturnal confusion, dryness of the mouth, nasal stuffiness, headache, peripheral edema, lactation, galactorrhea, and inhibition of ejaculation are noted on occasion; photosensitivity and other allergic skin reactions may occur but are extremely rare.
Before prescribing, see package insert for full product information.

in moderate to severe anxiety, 25 mg. t.i.d.

Mellaril®
(thioridazine)

SANDOZ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Flagyl® .....
brand of
metronidazole
Seminal vesicles
Bladder
Prostate gland

Destroys Trichomonads Wherever They Are

Flagyl seeks out the sites where trichomonads hide. Only a systemic agent can. Flagyl does, selectively and effectively.

Flagyl destroys trichomonads in the inner crypts, glands and cavities of the genitourinary tract in both women and men. Consequently, Flagyl is capable not only of curing trichomoniasis in women but also of preventing reinfection.

Correctly used, with due attention to repeat courses of treatment for resistant, deep-seated invasion and to the presumption of reinfection from male consorts, Flagyl has repeatedly produced up to 100 per cent cure in large series of patients.

When the diagnosis of trichomoniasis is positive, Flagyl is positive.

Dosage and Administration — In *women:* one 250-mg. oral tablet three times daily for ten days. A vaginal insert of 500 mg. is available for local therapy when desired. When used, one vaginal insert should be placed high in the vaginal vault each day for ten days; concurrently two oral tablets should be taken daily.
In *men* in whom trichomonads have been demonstrated: one 250-mg. oral tablet twice daily for ten days.

Contraindications — Pregnancy; disease of the central nervous system; evidence or history of blood dyscrasia.

Precaution—Complete blood cell counts should be made before, during and after therapy, especially if a second course is necessary.

Side Effects—Infrequent and minor side effects include nausea, metallic taste, furry tongue and headache. Other effects, all reported in an incidence of less than 1 per cent, are diarrhea, dizziness, vaginal dryness and burning, dry mouth, rash, urticaria, gastritis, drowsiness, insomnia, pruritus, sore tongue, darkened urine, anorexia, vomiting, epigastric distress, dysuria, depression, vertigo, incoordination, ataxia, abdominal cramping, constipation, stomatitis, numbness of an extremity, joint pains, confusion, irritability, weakness, flushing, cystitis, pelvic pressure, dyspareunia, fever, polyuria, incontinence, decreased libido, nasal congestion, proctitis and pyuria. Elimination of trichomonads may aggravate candidiasis.

SEARLE *Research in the Service of Medicine*

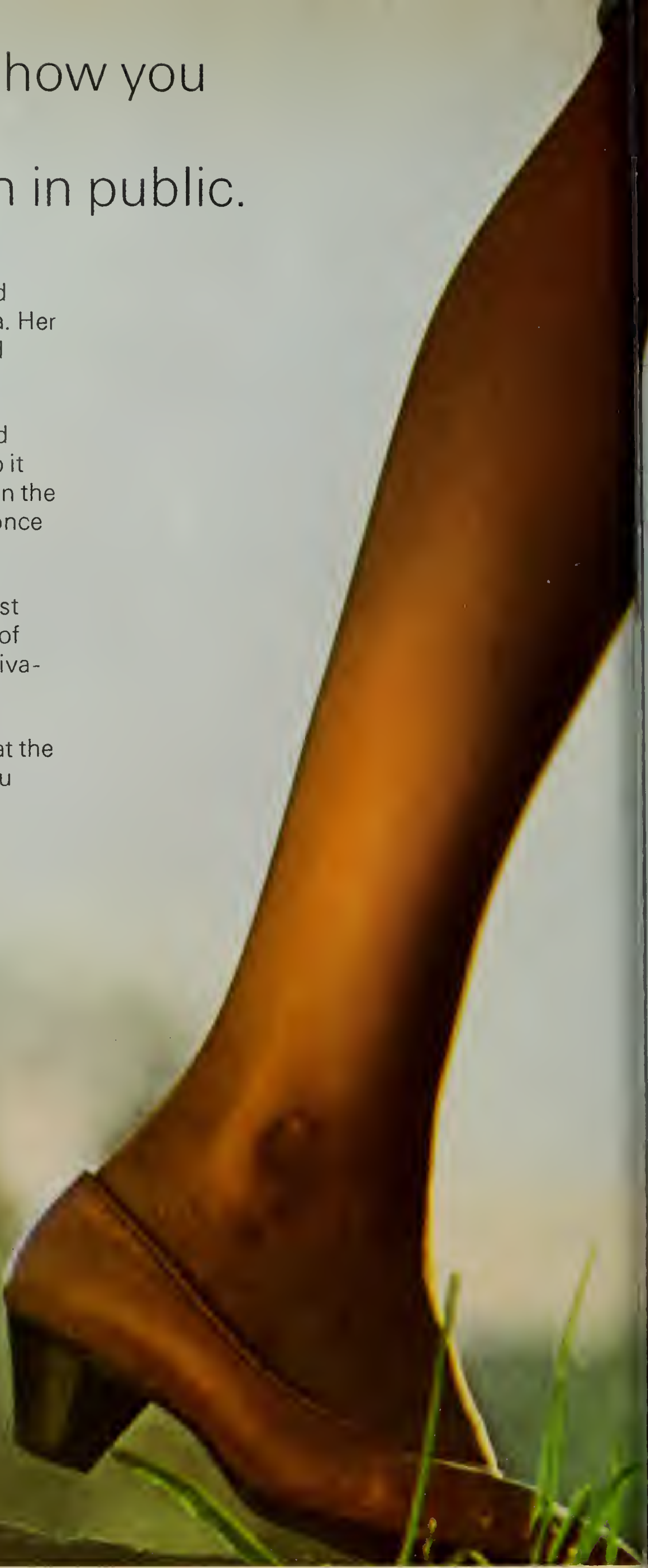
Did Dorothy Larson show you her ankles in private? Now she shows them in public.

Your office examination would have confirmed that Mrs. Larson was up to her knees in edema. Her heart was beginning to fail. And her ankles had disappeared under an inch of salty water.

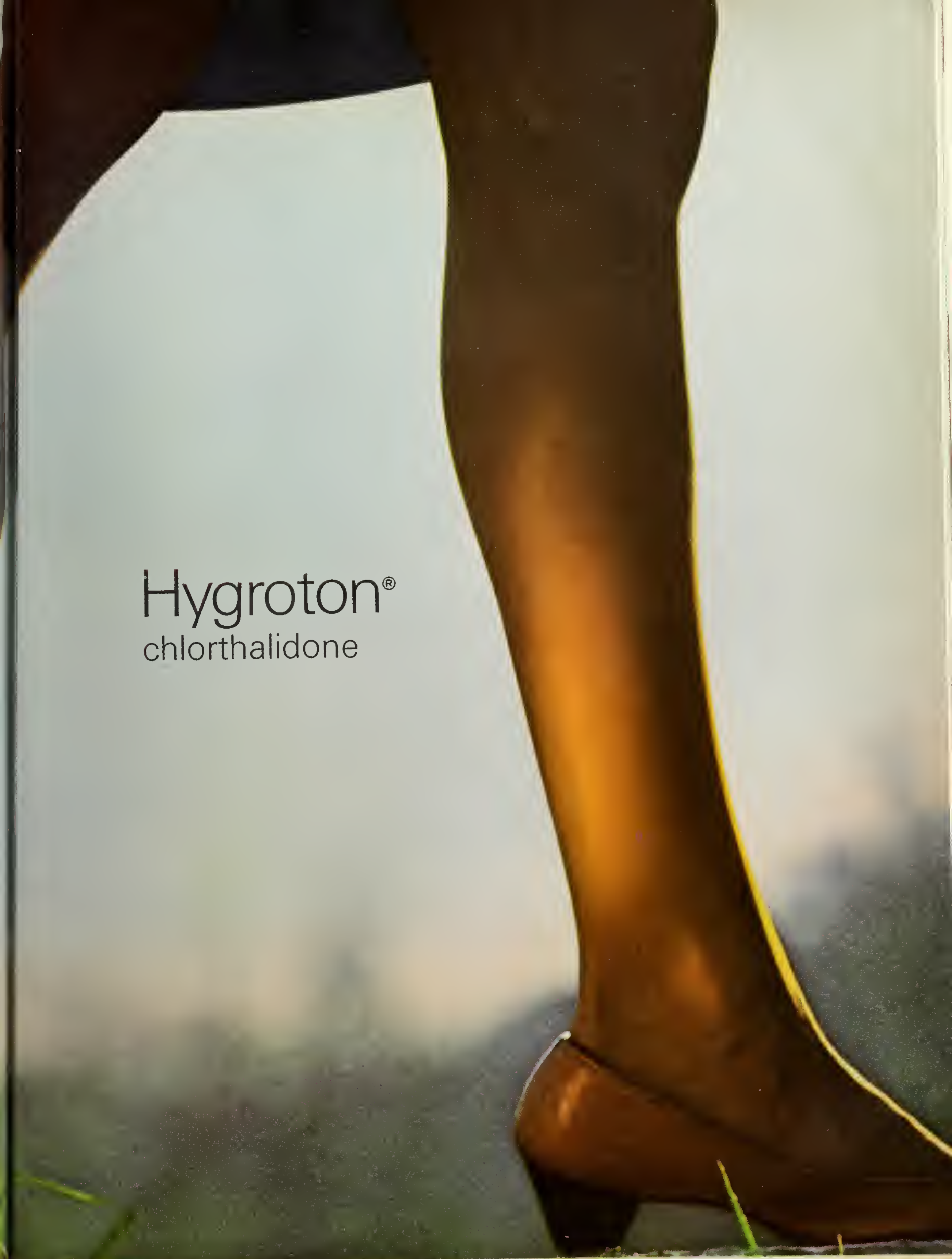
Along with digitalis, you might have prescribed Hygroton. To get rid of the edema. And to keep it from coming back. And you prescribe Hygroton the same way you usually prescribe digitalis: just once a day.

Tablet for tablet, Hygroton is just about the most effective diuretic going. And it costs a fraction of what Mrs. Larson would have to spend for equivalent therapy with short-acting diuretics.

In fact, Hygroton is an awfully nice way to treat the Mrs. Larsons in your practice. Just tell them you can get their ankles back at half price.



Indications: Hypertension and many types of edema involving retention of salt and water.
Contraindications: Hypersensitivity and most cases of severe renal or hepatic disease.
Warning: With administration of enteric-coated potassium supplements, the possibility of small bowel lesions should be kept in mind.
Precautions: Reduce dosage of concomitant antihypertensive agents by at least one-half. Discontinue if the BUN rises or liver dysfunction is aggravated. Electrolyte imbalance and potassium depletion may occur; take special care in cirrhosis or severe ischemic heart disease.



and in patients receiving corticosteroids, ACTH, or digitalis. Salt restriction is not recommended.
Side Effects: Dizziness, weakness, nausea, vomiting, hyperglycemia, hyperuricemia, headache, muscle cramps, postural hypotension, constipation, leukopenia, thrombocytopenia, agranulocytosis, impotence, dysuria, transient myopia, skin reactions, including urticaria and purpura, epigastric pain, or G.I. symptoms after prolonged administration.

Average Dosage: One tablet (100 mg.) with breakfast daily or every other day.
Availability: Tablets of 100 mg.

6524-V(B)

For full details, see prescribing information.

...so you might say Hygroton is good public relations for Mrs. Larson

Because it gets her *out* in public in the first place. At 43, Mrs. Larson worries about appearances and swollen ankles don't help.

But Hygroton's cosmetic effect is only half the story. Hygroton and digitalis therapy helps her get back in the swing of things. Gives her a second wind. Gets rid of the extra pillow she needed for a good night's sleep. Now she even likes to take walks. Just for the fun of it!

When her troubles began, Mrs. Larson thought they were the signs of the change of life. It's a change all right, but one you can treat. And you can count on Hygroton to help keep her in public instead of in the hospital.

See preceding pages for brief summary of prescribing information.

Geigy

Geigy Pharmaceuticals
Division of Geigy Chemical Corporation
Ardsley, New York

answers, hold the key, should force their wishes upon the whole.

8. To concern itself not only with the quantity of service, but with mechanisms to evaluate the quality and effectiveness of that service, particularly in the smaller hospital where effective internal staff discipline is more difficult.

9. To concern itself with methods to prevent some of us—some professionals, some volunteers, and some private citizens too—from concentrating too intently on our areas of special interest, excluding other areas from our attention.

10. To be concerned not only with availability, but with accessibility and acceptability of comprehensive coordinated services, and to be concerned about this not only for patients who present themselves, but also for those who must be sought out, invited, and prepared—yes, assisted in seeking needed help.

11. To develop and make available a system of total health services so that a person in need of help can readily receive all the services required at the optimal time.

12. To watch over what happens and continually to update its planning in response to changing needs, thereby continually upgrading and improving quality of medical care rendered.

All this takes work—cooperation—understanding. It is more than something we can simply be "in favor of" in some abstract sense. For as an old saying goes:

Wishing and waiting won't improve our fate;
The Lord provides the fishes,
But we provide the bait.

THE DIAGNOSIS AND MANAGEMENT OF CANCER OF THE COLON AND RECTUM

The new professional educational film, DIAGNOSIS AND MANAGEMENT OF CANCER OF THE COLON AND RECTUM, is now available. It was approved for distribution by the National Medical and Scientific Committee of the American Cancer Society at its meeting on October 20, 1966.

The film demonstrates the diagnosis and treatment of both symptomatic and asymptomatic cancer of the colon and rectum; shows endoscopic motion pictures of malignant lesions and of the healthy colon; brings out the inadequacy of the digital examination alone; and stresses the importance of routine proctosigmoidoscopy and the guaiac test for asymptomatic patients, supplemented by barium enema when indicated. The film demonstrates the principles of surgery for cancerous lesions of the colon and rectum and emphasizes the importance of early diagnosis, before symptoms occur, in improving survival rates for this most common of all internal cancers.

Specifications: Color and Sound: 16 mm, Reels: 1, Length: 618 feet, Running Time: 17 min. 10 secs. Code #3741.

REQUESTS FOR BOOKINGS should be made to the state office, 401 The Columbia Building, Columbia, S. C. 29201. Two weeks advance notice is very helpful in booking the film.

The first comprehensive text to help teachers understand and combat the problem of drug abuse among students is now available.

It is "Drug Abuse: Escape to Nowhere—A Guide for Educators" published by Smith Kline & French Laboratories, the Philadelphia-based prescription drug firm, in cooperation with the American Association for Health, Physical Education, and Recreation, a department of the National Education Association.

Well established Solo Pediatric Practice (with coverage arrangements) available in Aiken, South Carolina. Contact James E. Padgett, Jr., M. D., 137 York Street, South East, Aiken, South Carolina 29801.

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Mt. Pleasant

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Scientific Day will be held August 9 at Self Memorial Hospital, Greenwood.

FACTS COUNT

IN PLANT SITE SELECTION

facts count, too, in selecting health care coverage

Companies selecting South Carolina sites for new plants invested over half a billion dollars on new manufacturing facilities in 1965, more than double the previous year's record. This brings the new industrial investment figure for the past six years to a high of nearly two billion dollars. During this period, well over 100,000 new job opportunities were created in South Carolina.

Many facts count for companies in selecting plant sites. A ready labor market, low utility costs, favorable tax rates, and the total cultural environment of the area are some of the facts that count for companies coming to the Palmetto State.

Facts about health care coverage count for companies when they review employee benefits. Some 2,500 South Carolina companies have already made the facts count. They have chosen Blue Cross and Blue Shield. It's the realistic health care program because coverage is based on the actual care required for recovery. Another fact that counts for new as well as long-time South Carolina industries . . . dues are determined by the health care needs of South Carolinians.

Call your experienced Blue Cross and Blue Shield representative soon. When he has given you all the facts about health care coverage, you'll choose Blue Cross and Blue Shield.

Blue Cross®–Blue Shield®

Blue Shield of South Carolina · I-20 E at Alpine Road, Columbia, S. C.

Book Reviews

NEW HOPE FOR YOUR SKIN by Irwin Lubowe, M, D., F. A. C. A. Pocket Books Inc. New York 10018. First Printing May 1966. 75 Cents.

This is a handy pocketbook on skin diseases by a well known author. In 257 pages written in a particularly charming, interesting style, Dr. Lubowe has presented a comprehensive review of skin troubles and their care. He uses simple, easily understood language, which is interesting alike to laymen and to physicians.

The final chapter on New Horizons, starting with the discovery (not the use) of sulfanilamide in 1908, goes on to chart the ever increasing rapidity of discovery of new methods and treatments for skin diseases. Dr. Lubowe has included a glossary of terms used in the book. For the lay reader, this is valuable and helpful indeed.

I recommend this book highly, both for skin specialists and for all patients and other physicians who may wish to know more about skin diseases without having recourse to extensive larger textbooks.

John van deErve, M. D.

YOU ARE AS YOUNG AS YOUR SPINE. Edith Hearn. Doubleday & Company, Inc., 1967. $4.50.

This slim volume written in the vernacular for lay consumption sets the medical reader on edge immediately by purporting to tell the average person how to cure his "slipped disc" himself. According to Miss Hearn (Cyriax Physiotherapist M.S.C. - M.E. Let-London) most of the ailments even remotely associated with the spine are due to "slipped discs" and all one has to do to cure them is to carry out her recommended exercises for one minute three times a day. The author touts the methods of Dr. James Cyriax and points out that "unfortunately the only place where these manipulative treatments are taught at present is St. Thomas Hospital in London". Most of what is written in the book is old and what purports to be new is of very little value to layman or physician.

John A. Siegling, M. D.

DIABETES FOR DIABETICS, George F. Schmitt, M. D. The Diabetes Press of America, Inc., Miami. $5.95.

This is a book for the patient. It covers the essentials of our knowledge of diabetes that should be useful to the sufferer from the disease, and gives details of techniques of treatment up to the point at which expert medical care becomes necessary. There are the usual details of the diet.

This reviewer was a little puzzled by the lavish use of color plates depicting such exotic objects as an egg, a cabbage, a frankfurter and a hamburger, things familiar to any child and not glorified by the photography. He was also a little disturbed by the use of certain brands of food in the pictures, not because they were not good brands, but because they seemed to be singled out of many equivalents. Nor could he find any mention of the useful Tes-Tape which diabetics find handy.

But, despite these carping remarks, the book is sound and should be useful in its field.

J.I.W.

NEURO-OPHTHALMOLOGY, Vol. III, J. Lawton Smith, M. D., C. V. Mosby Company, St. Louis, 1967. Pg 349. 200 black and white illustrations. $25.00.

This beautifully bound and printed book contains most of the proceedings of the third annual neuro-ophthalmology symposium of the University of Miami at the Bascom Palmer Eye Institute. Much of the material is not felt to be of symposium quality. Excellent neuro-radiological evaluation of lesions producing changes in the sphenoid strut and those affecting the third ventricle and its adjacent structures make the price of this somewhat expensive book almost worthwhile. The photographic reproductions of the x-rays are uniformly outstanding. A useful and readible classification and discussion of the diffuse scleroses is included. "Smithisms" are included in the form of recent advances in neuro-ophthalmology, introduction to ocular motility and eye signs in the retarded child. Eight chapters are devoted wholely or in part to pediatric neurology. This book will be of interest to both neurology and neurosurgical residents and to the ophthalmologists interested in neurology.

Bart Antine, M. D.

Deaths

Dr. Paul Kent Switzer, Sr.

Dr. Paul Kent Switzer, 82, Union physician, died April 22.

A native of Switzer, he was graduated from Wofford College in 1907 and the Medical College in 1910. He then practiced in Fort Motte and in 1912 married Miss Molly Layton. He began his practice in Union in 1914.

In 1961, Dr. Switzer was honored on his 50th anniversary as a physician by the Union County Medical Association and the Union Nurses Club, and a presentation was made on behalf of the American Medical Association.

He was a trustee of Wallace Thomson Hospital since its construction.

Dr. Charles F. Timmons

Dr. Charles F. Timmons, 42, of Seneca died in April.

A radiologist at Oconee Memorial Hospital, Dr. Timmons was a native of Lake City and formerly was with Self Memorial Hospital in Greenwood.

He was educated in Lake City schools and The Citadel and was in the Army Air Force during World War II. He was a graduate of the Medical College of South Carolina and served his internship at Roper Hospital.

Dr. William T. Martin

Dr. William T. Martin, 77, died April 7 in Greenville.

A native of Simpsonville, he received his early education in the public schools of Greenville County. He received his M. D. degree from the University of Maryland and for many years practiced medicine in Pelzer and Joanna. In 1941 he retired and had maintained business and large farming interests in Greenville County.

He was a veteran of World War I, serving in the Medical Corps as a captain.

Dr. Larry Craig

Dr. Larry Craig, 33, a native of Anderson, died in April in New York.

A resident of Atlanta, Dr. Craig was graduated from Emory University and the School of Medicine at Emory.

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Maybe he doesn't know when he's well off. But you might want to prescribe long-acting Novahistine LP anyway.

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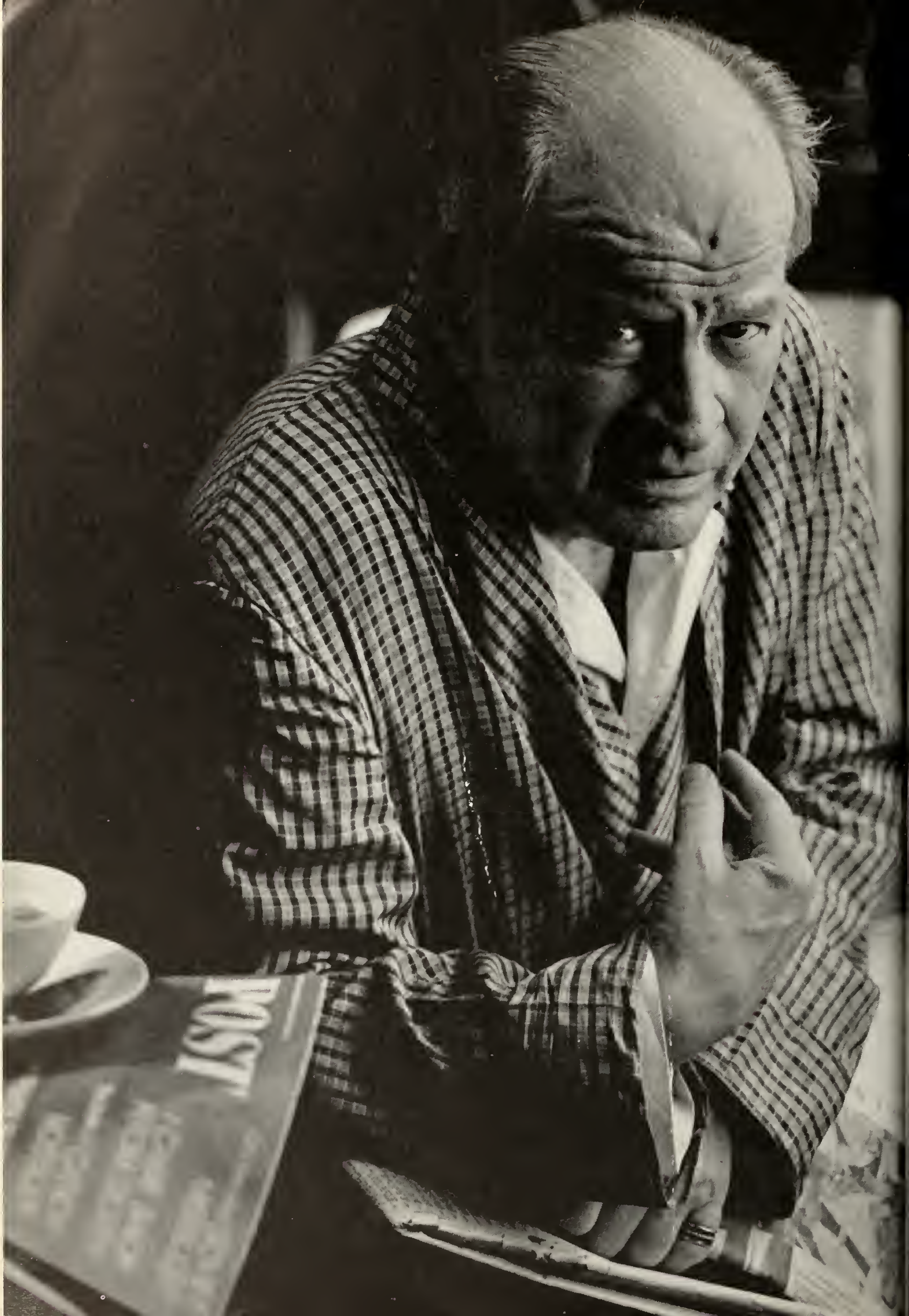
POST

Posed by professional model

I'm supposed to get up and do things?

With my heart?

It's entirely natural—and may even be desirable—for the cardiovascular patient to be somewhat anxious about himself.

But when anxiety leads to unreasonable self-imposed limitations and restrictions . . . when it aggravates cardiovascular symptoms . . . when it interferes with restful sleep, measures to help alleviate the anxiety are probably in order.

One measure, of course, is reassurance. Another, adjunctive measure, is EQUANIL (meprobamate).

Over a decade of experience has shown that EQUANIL (meprobamate) is generally well tolerated as well as effective. Side effects are usually limited to transient drowsiness; serious, therapy-interrupting side effects are rare.

Cautions: Carefully supervise dose and amounts prescribed, especially for patients prone to overdose themselves. Excessive prolonged use may result in dependence or habituation in susceptible persons—as ex-addicts, alcoholics, severe psychoneurotics. After prolonged high dosage, drug should be withdrawn gradually to avoid possibly severe withdrawal reactions including epileptiform seizures. Side effects include drowsiness and, rarely, allergic or idiosyncratic reactions. These reactions, sometimes severe, can develop in patients receiving only 1 to 4 doses who have had no previous contact with meprobamate. Mild reactions are characterized by urticarial or erythematous maculopapular rash. Acute non-thrombocytopenic purpura with petechiae, ecchymoses, peripheral edema and fever have been reported. Meprobamate should be stopped and not reinstituted. Severe reactions, observed very rarely, include angioneurotic edema, bronchial spasms, fever, fainting spells, hypotensive crises (1 fatal case), anaphylaxis, stomatitis and proctitis (1 case) and hyperthermia. Warn patients of possible reduced alcohol tolerance. Should drowsiness, ataxia, or visual disturbances occur, dose should be reduced. If symptoms persist, patients should not operate vehicles or dangerous machinery. A few cases of leukopenia, usually transient, have been reported following prolonged dosage. Other blood dyscrasias—aplastic anemia (1 fatal case), thrombocytopenic purpura, agranulocytosis and hemolytic anemia—have occurred rarely, almost always in the presence of known toxic agents. One fatal case of bullous dermatitis following intermittent use of meprobamate with prednisolone has been reported. Prescribe very cautiously for patients with suicidal tendencies. Suicidal attempts should be treated with immediate gastric lavage and appropriate supportive therapy.

Contraindications: History of sensitivity to meprobamate.

Composition: Tablets, 200 mg. and 400 mg. meprobamate. Coated Tablets, WYSEALS® EQUANIL (meprobamate) 400 mg. Continuous-Release Capsules, EQUANIL L-A (meprobamate) 400 mg.

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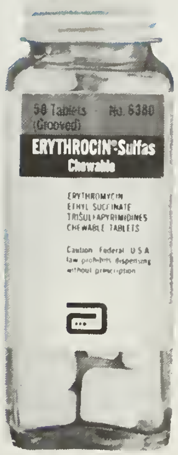
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ERYTHROCIN®-SULFAS Chewable

(Erythromycin ethyl succinate-trisulfapyrimidines chewable tablet)

In clinical trials[1,2], this orange-flavored tablet was given to 55 patients, aged four months to 18 years.

Diagnoses (multiple in some cases) represented a cross section of bacterial infections commonly seen in pediatric office practice.

Therapy was given from three to 12 days, with an average of six days.

Of the 55 patients, 30 were reported cured within 72 hours, while 22 showed partial recovery within the same time, and subsequent clinical cure.

A clinical cure rate of 94.5%

ERYTHROCIN®-SULFAS Granules

(Erythromycin ethyl succinate-trisulfapyrimidines granules for oral suspension)

87 patients were treated[1,2]—all children, ages four months to 15 years.

The diagnoses were multiple in some cases and were chiefly bacterial infections of the respiratory tract.

Dosage was maintained from three to 10 days; average treatment was five days. All of the ill children accepted the orange-flavored suspension favorably.

53 were clinically cured within 72 hours, while 32 showed partial relief within the same time, and subsequent clinical cure.

701358

A clinical cure rate of 97.7%

1. Case Reports on File, Dept. Clin. Development, Abbott Laboratories.
2. Polley, R.F.L., Use of Erythromycin-Sulfas in Office Practice, Western Med., 7:177, July, 1966.

ABBOTT

Brief Summary on next page

ERYTHROCIN®-SULFAS
Brief Summary

Contraindications: Known sensitivity to erythromycin or sulfonamides. Because of the possibility of kernicterus with sulfonamides, do not use in pregnancy at term, premature or newborn infants.

Warnings: As with other forms of sulfonamide therapy, carefully evaluate patients with liver or kidney damage, urinary obstruction, or blood dyscrasia. Deaths have been reported from hypersensitivity reactions and blood dyscrasias following use of sulfonamides. Perform blood counts and liver and kidney function tests if used repeatedly at close intervals or for long periods.

Precautions, Side Effects: Occasionally mild abdominal discomfort, nausea or vomiting may occur with erythromycin, generally controlled by reduction of dosage. Mild allergic reactions (such as urticaria and other skin rashes) may occur. Serious allergic reactions have been extremely infrequent. Use sulfonamides with caution in patients with a history of allergy. Assure adequate fluid intake to prevent crystalluria and institute alkali therapy if indicated. If overgrowth of nonsusceptible organisms occurs, withdraw the drug and institute appropriate treatment. If a patient should show signs of hypersensitivity, appropriate countermeasures (e.g. epinephrine, steriods, etc.) should be administered and the drug withdrawn.

Adverse Reactions: Sulfonamide therapy may be associated with headache, nausea, vomiting, urticaria, diarrhea, hepatitis, pancreatitis, blood dyscrasias, neuropathy, drug fever, skin rash, injection of the conjunctiva and sclera, petechiae, purpura, hematuria and crystalluria.

Side effects due to erythromycin are infrequent, but occasional abdominal discomfort, nausea, or vomiting, urticaria and other skin rashes may occur.

Supplied: The Granules for Oral Suspension come in bottles of 60 ml. and 150 ml. The Chewable tablets are in bottles of 50. Each 5-ml. teaspoonful of reconstituted Granules or each Chewable tablet provides erythromycin ethyl succinate equivalent to 125 mg. of erythromycin activity and 167 mg. of each of sulfadiazine, sulfamerazine and sulfamethazine.

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When eating fads of teens or tots Lead to a sudden case of "trots"

Parepectolin for quick relief of acute diarrhea
...soothes colicky pain with paregoric*
...consolidates fluid stools with pectin
...adsorbs irritants with kaolin,
and protects intestinal mucosa

In children, Parepectolin may be used to control diarrhea promptly and prevent dehydration, until etiology has been determined. In some cases, Parepectolin may be all the therapy necessary.

Parepectolin®

Each fluid ounce of creamy white suspension contains:
*Paregoric (equivalent) .... (1.0 dram) 3.7 ml.
Contains opium (¼ grain) 15 mg. per fluid ounce.
warning: may be habit forming
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Kaolin (specially purified) ... (85 grains) 5.5 Gm.
(alcohol 0.69%)

Usual Children's Dose: One or two teaspoonfuls three times daily.

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Each capsule contains:

Vitamin B_1 (Thiamine Mononitrate)	10 mg
Vitamin B_2 (Riboflavin)	10 mg
Vitamin B_6 (Pyridoxine HCl)	2 mg
Vitamin B_{12} Crystalline	4 mcgm
Vitamin C (Ascorbic Acid)	300 mg
Niacinamide	100 mg
Calcium Pantothenate	20 mg

Recommended intake: Adults, 1 capsule daily, for the treatment of vitamin deficiencies. Supplied in decorative "reminder" jars of 30 and 100; bottles of 500.

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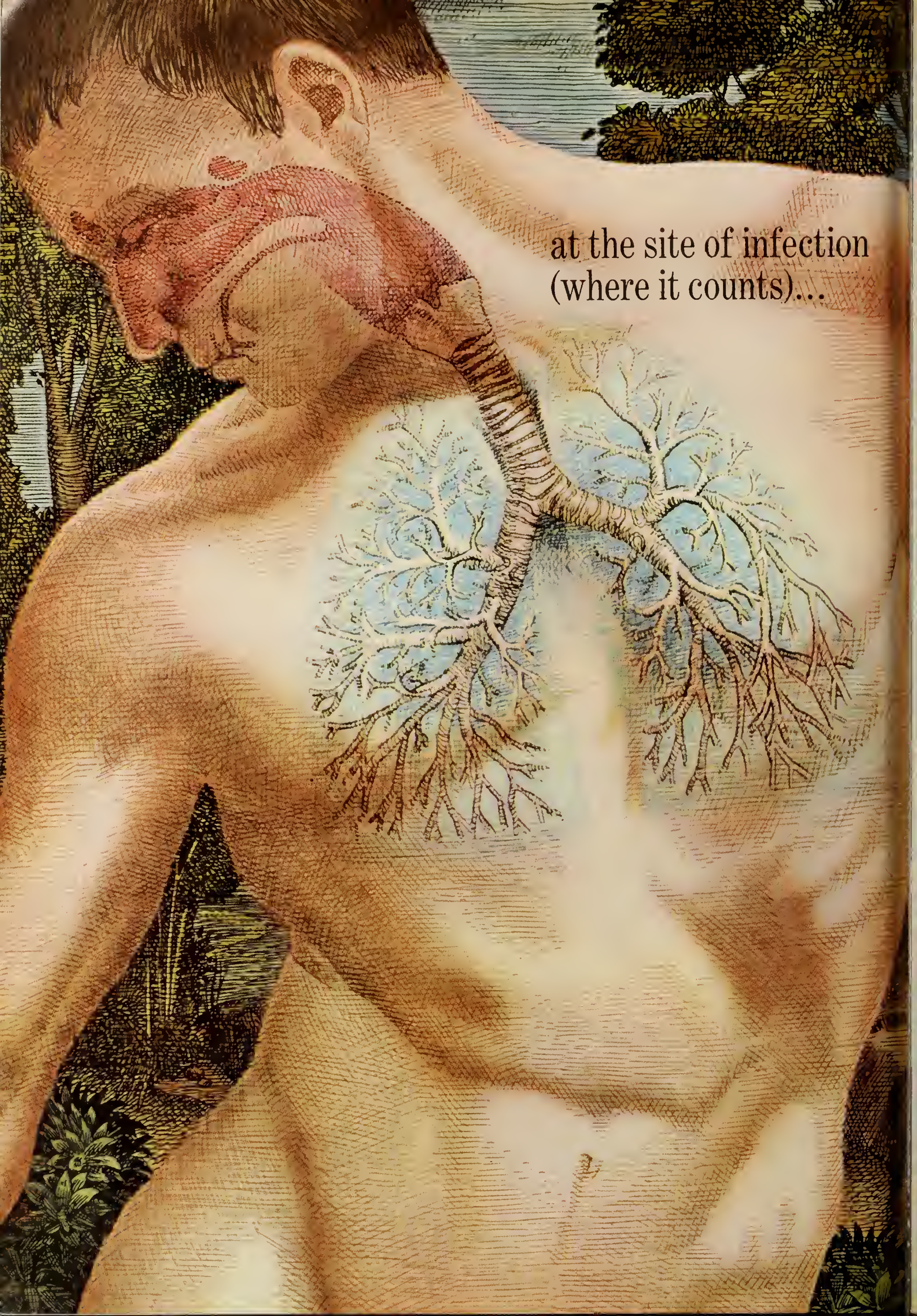
at the site of infection
(where it counts)...

Ilosone® provides more antibacterial activity than any other oral erythromycin

Acid stable, better absorbed ... Ilosone produces faster, higher, more prolonged blood levels, even in the presence of food[1-3]

Because it is the most active form of oral erythromycin, Ilosone can help assure consistently greater antibacterial activity at the site of infection. Ilosone produces peak antibacterial blood levels two to four times those of other erythromycin preparations.[1,2] Not only are these levels attained earlier, but they are maintained for much longer periods. Even the presence of food does not seem to affect the activity of Ilosone.[1,3]

In the treatment of patients with bacterial infections susceptible to erythromycin, Ilosone has compiled an excellent therapeutic record. Since it exerts its greatest activity against gram-positive organisms, it is particularly useful in common respiratory and soft-tissue bacterial infections. Ilosone kills—not merely inhibits—streptococci, pneumococci, and more strains of staphylococci than any other macrolide antibiotic. This bactericidal action, coupled with the high antibacterial levels attained, makes Ilosone especially valuable in patients with low host resistance, such as infants, debilitated individuals, and diabetics.

Ilosone has shown no cross-resistance with penicillin and may be effective against organisms that have become resistant to that agent. Despite its high antibacterial activity, Ilosone has demonstrated a low incidence of side reactions. Blood dyscrasias, ototoxicity, and tooth staining have not been observed. Infrequent cases of drug idiosyncrasy, manifested by a cholestatic jaundice, have occurred, but there have been no known definite residual effects.

700121

Ilosone®

Erythromycin Estolate

Lilly

(See next page for prescribing information.)

Ilosone®/the most active oral form of erythromycin

Description: Ilosone is the most active form of oral erythromycin that has been developed. Because it is stable in acid, well absorbed, and excreted in lesser amounts in the bile, it provides faster, higher, and longer-lasting levels of antibacterial activity (ABA) in the serum, even when taken with food, than do comparable doses of erythromycin.

Indications: Ilosone is indicated in infections caused by microorganisms sensitive to its action (especially staphylococci, hemolytic streptococci, and pneumococci). The drug is therefore useful in a high proportion of bacterial diseases encountered in clinical practice and particularly in the treatment of bacterial infections of the upper and lower respiratory tract and soft tissues.

In the treatment of acute bacterial pharyngitis and tonsillitis, this antibiotic has promptly eradicated the bacteria (streptococci) and has produced a parallel prompt clinical improvement. There have been no group A beta-hemolytic streptococci resistant to this preparation. In beta-hemolytic streptococcus infections, treatment should be maintained for ten days to prevent the development of rheumatic fever or glomerulonephritis.

Erythromycin estolate has proved to be very effective in pneumococcus pneumonia and in acute bronchitis with pneumococci on culture. Bronchopneumonia and otitis media in children have responded well to its use.

The antibiotic has been used very successfully in staphylococcus infections. Good therapeutic results have been obtained in soft-tissue infections, abscesses, cellulitis, carbuncles, wound infections, and furunculosis.

In serious staphylococcus infections, erythromycin preparations should be used only in combination therapy with other antimicrobial agents. As is the case with any treatment regimen used in these severe conditions, surgical procedures should be performed when indicated, and large dosages of the antimicrobial agents should be employed. In this fashion, Ilosone has been effective in staphylococcus pneumonia, osteomyelitis, septicemia, empyema, and meningitis.

Multiple 500-mg. doses of the drug have been useful in gonorrhea and syphilis. Since penicillin is the drug of choice for the treatment of syphilis and gonorrhea, erythromycin estolate should be employed for these infections only in patients with a history of penicillin allergy. Also, other infections due to susceptible bacteria in patients known to be hypersensitive to penicillin or other antibiotics may be considered for treatment with Ilosone.

Contraindications: Ilosone is contraindicated in patients with a known history of sensitivity to this drug and in those with preexisting liver disease or dysfunction.

Side-Effects: Data obtained from seven years' use of propionyl erythromycin ester and erythromycin estolate (Ilosone) indicate that hepatic dysfunction with or without clinical jaundice may occur during or following courses of therapy with the drug.

Changes in liver function tests in such cases have been indicative of intrahepatic cholestasis. The symptoms appear to be the result of a form of sensitization. The initial symptoms have appeared in some cases after a few days of treatment but generally have followed one or two weeks of continuous therapy or several courses of the drug. Symptoms reappear promptly if the drug is readministered to sensitive patients, usually within forty-eight hours. Eosinophilia was noted in peripheral blood counts. The findings readily subsided without apparent residual effects when treatment was discontinued. Recovery was delayed in one reported instance. The physician indicated in this case that either drug-induced jaundice or viral hepatitis may have been responsible for the findings.

In one clinical study involving ninety-three patients treated with the antibiotic, three cases of jaundice were observed and an additional eleven cases developed some changes in liver function tests. Three of the patients had abnormal liver function tests a second time on readministration of the drug.

Even though it is assumed that not all cases of jaundice have been reported, it seems clear that the number is small compared with the amount of drug that has been used. Reported cases have included persons in whom there had been administered other drugs known to be associated at times with hepatic side-effects and cases in which the presence of viral hepatitis or other disease may have been responsible for the findings. In some of the cases, associated gastro-intestinal symptoms simulated the colic of biliary tract disease. In other instances, clinical symptoms and results of liver function tests resembled findings in extrahepatic obstructive jaundice. It appears that the occurrence of jaundice after administration of Ilosone is infrequent, but further investigations are being made to estimate its incidence more accurately.

In those cases mentioned above in which jaundice appeared to be definitely related to use of the drug, laboratory findings were characterized by increased direct-reacting bilirubin, elevated alkaline phosphatase levels, negative or weakly positive cephalin flocculation and thymol turbidity tests, elevated serum glutamic oxalacetic transaminase levels, peripheral eosinophilia, and normal cholecystograms.

Individual idiosyncrasy seems evident since jaundice has not been reported in other patients taking prolonged courses of the medication. Patients with chronic infection have been given 1 to 2 Gm. of the drug daily for periods of two to six months, and patients with rheumatic fever have taken prophylactic doses of 0.5 Gm. daily for two years without difficulty. In one group of 144 patients who received the drug daily for two years, no jaundice was noted. It was of interest that members of six of these patients' families, who were not taking the drug, had episodes of jaundice during the study period.

Transaminase and serum alkaline phosphatase levels were determined in a group of fifty-four adults and children who took 250 mg. of Ilosone daily for an average of sixteen months as rheumatic fever prophylaxis. The results were compared with those of a similar group of forty-four patients who received penicillin. There were no cases of jaundice in either group. Elevation of SGPT and serum alkaline phosphatase levels during the course of treatment was observed in one patient treated with Ilosone and in two patients treated with penicillin. Seven other patients in the group receiving Ilosone and four others in the penicillin group showed elevations in one of the tests at some time during administration of the drugs.

Very satisfactory therapeutic results, without toxicity, were reported in 102 pediatric patients who received short-term (ten-day) courses of Ilosone in the treatment of streptococcus infections. Results of liver function tests in these patients were comparable to those in a similar control group who had received penicillin.

Gastro-intestinal disturbances not associated with hepatic effects are observed in a small proportion of individuals as a result of a local stimulating effect of the medication on the alimentary tract; however, the normal intestinal gram-negative bacterial flora is not appreciably altered by erythromycin drugs.

Although allergic manifestations are uncommon with the use of erythromycin, there have been occasional reports of urticaria, skin eruptions, and, on rare occasions, anaphylaxis.

Administration and Dosage: Ilosone is administered orally.
Ilosone Pulvules®
Ilosone Chewable Tablets
Ilosone Drops
Ilosone, 125, for Oral Suspension

For infants and for children under twenty-five pounds of body weight, the usual dosage is 5 mg. per pound every six hours; for children twenty-five to fifty pounds, 125 mg. every six hours. (Tablets Ilosone Chewable should be chewed or crushed and swallowed with water.)

For adults and for children over fifty pounds, the usual dosage of Ilosone is 250 mg. every six hours.

For severe infections, these dosages may be doubled.

When larger doses are indicated, parenteral erythromycin therapy should be considered.

In the treatment of syphilis, the recommended total dosage is 20 to 30 Gm. given in divided doses for a period of ten to fifteen days. Close follow-up of the patient is necessary since erythromycin drugs have not had adequate evaluation in all stages of syphilis. Examinations of spinal fluid are recommended as part of the follow-up therapy.

For gonorrhea, 500 mg. four times a day for four days are recommended.' In the treatment of gonorrhea, patients with a suspected lesion of syphilis should have a dark-field examination before receiving antibiotics, and monthly serologic tests should be made for a period of three months.

How Supplied: Pulvules Ilosone, Capsules, N.F., 125 and 250 mg. (equivalent to base), in bottles of 24 and 100.

Tablets Ilosone Chewable, N.F., 125 mg. (equivalent to base), in bottles of 50.

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References: 1. Griffith, R. S., and Black, H. R.: Am. J. M. Sc., *247*:69, 1964. 2. Griffith, R. S., and Black, H. R.: Antibiotics & Chemother., *12*:398, 1962. 3. Hirsch, H. A., Pryles, C. V., and Finland, M.: Am. J. M. Sc., *239*:198, 1960.

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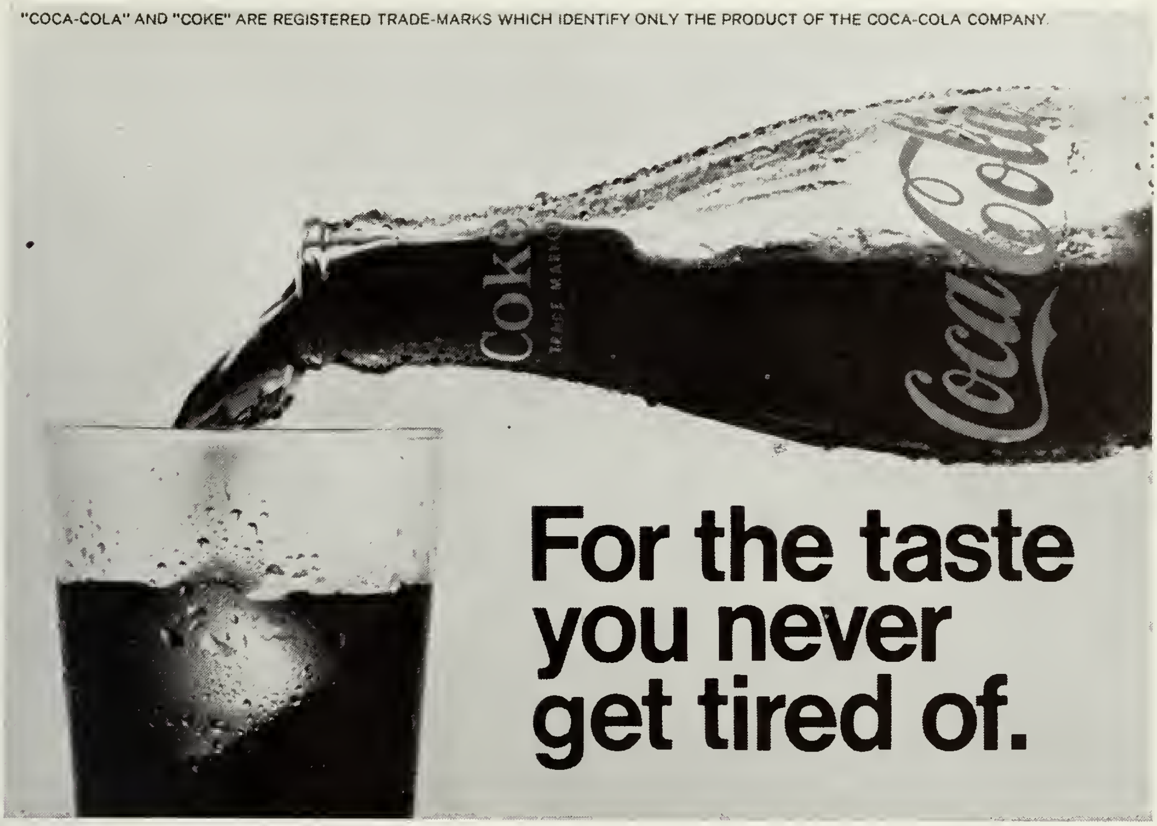

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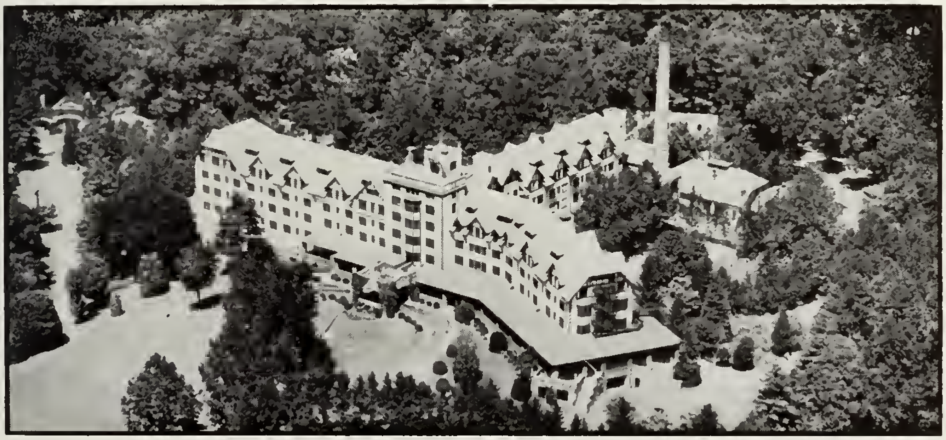

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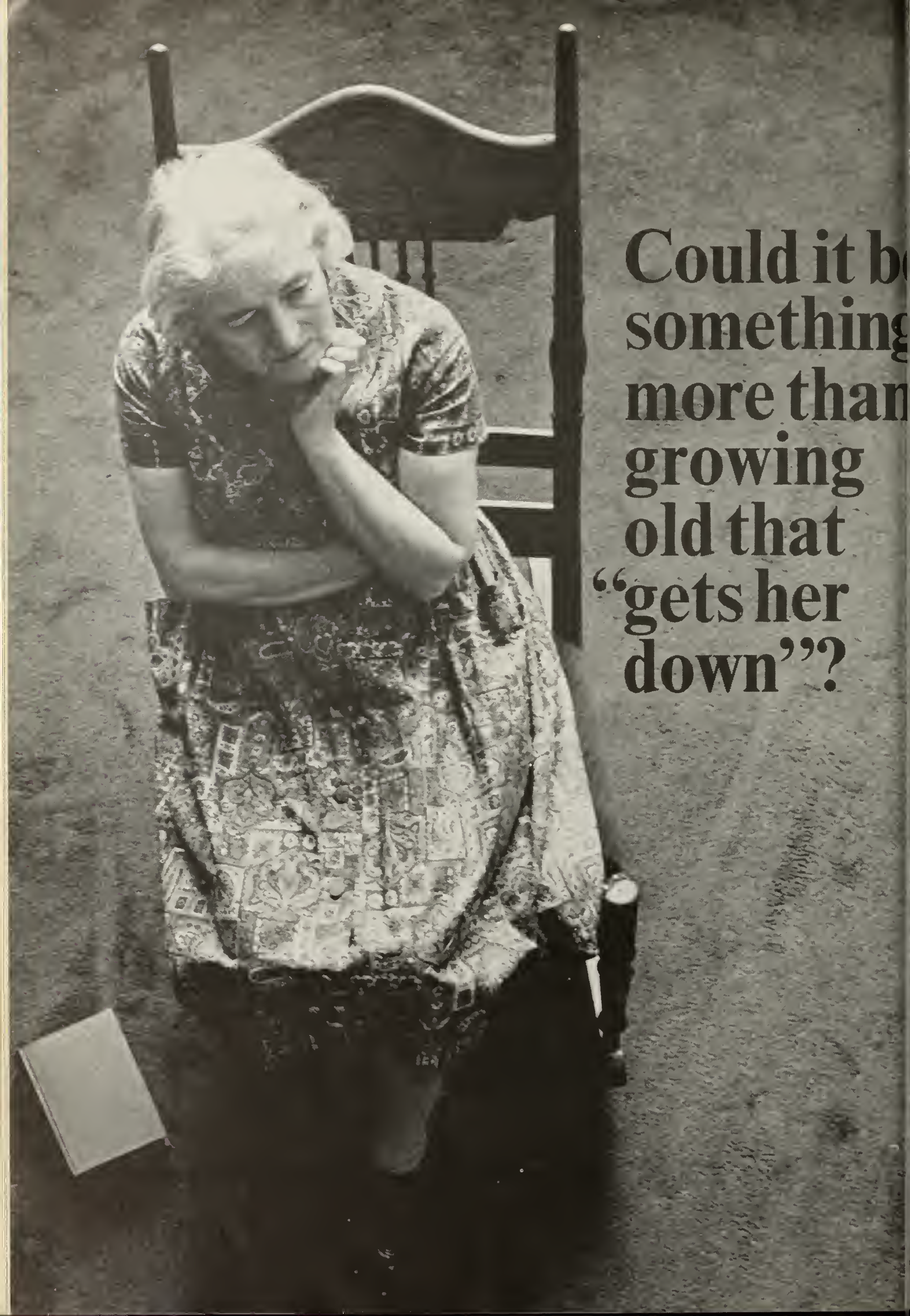
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References:

(1) Siver, R. H.: CMD, *21*:109, September 1954. (2) Frykman, H. H.: Minn. Med., *38*:19-27, January 1955. (3) McGivney, J.: Tex. State Jour. Med., *51*:16-18, January 1955. (4) Quehl, T. M.: Jour. of Florida Acad. Gen. Prac., *15*:15-16, October 1965. (5) Weekes, D. J.: N.Y. State Jour. Med., *58*:2672-2673, August 1958. (6) Weekes, D. J.: EENT Digest, *25*:47-59, December 1963. (7) Abbott, P. L.: Jour. Oral Surg., Anes., & Hosp. Dental Serv., 310-312, July 1961. (8) Rapoport, L. and Levine, W. I.: Oral Surg., Oral Med. & Oral Path., *20*:591-593, November 1965.

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Warning: May be habit-forming.

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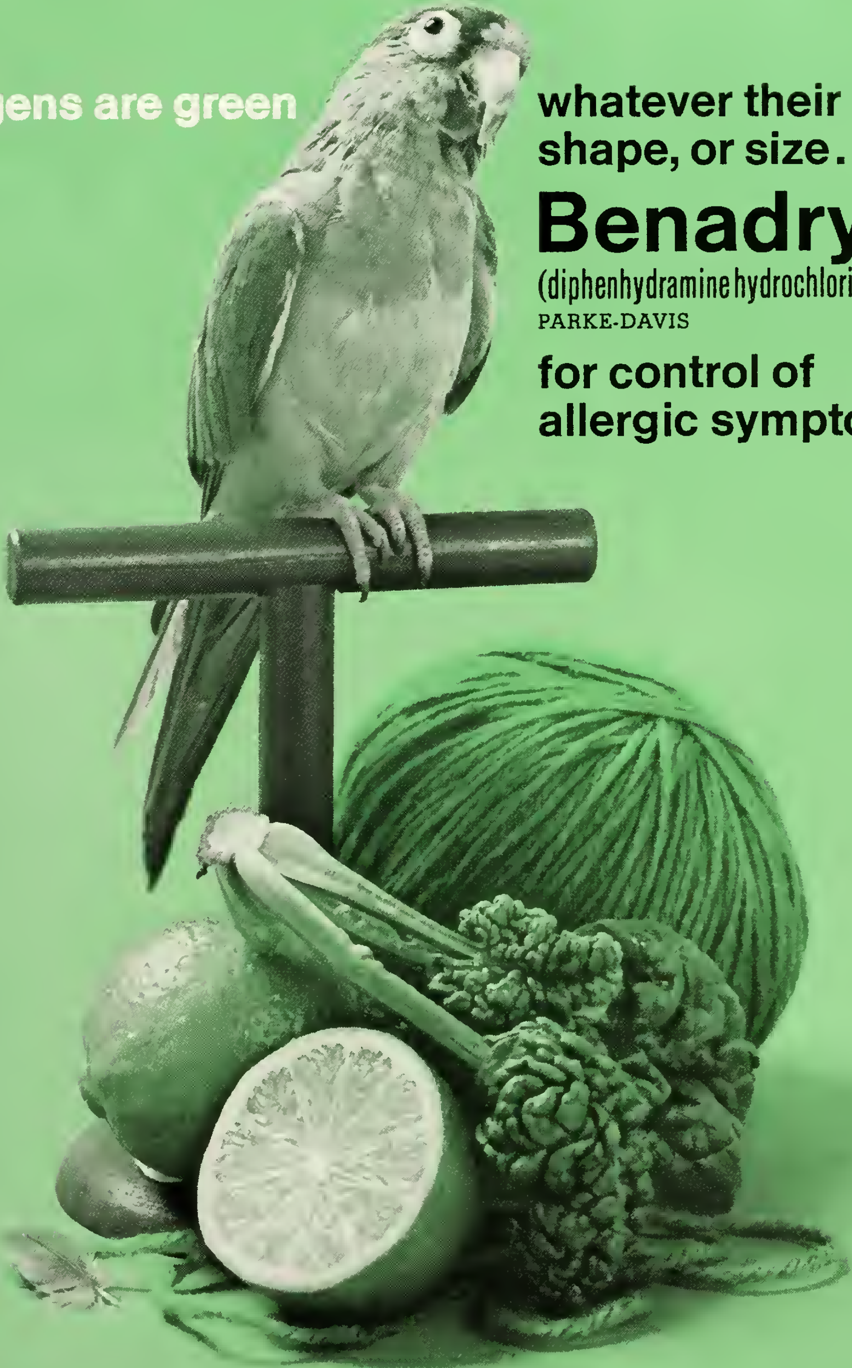

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A.H.F.S. CATEGORY 8:12.16

References: 1. Abstracted from *Antibiotic Sensitivity of Staphylococci Studied from November 1962 through August 1965*, reported by Griffith, L.J., Staphylococcus Reference Laboratory, V.A. Hospital, Batavia, N.Y. 2. Data on file, Bristol Laboratories.

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1. Case Reports on File, Dept. Clin. Development, Abbott Laboratories.
2. Polley, R.F.L., Use of Erythromycin-Sulfas in Office Practice, Western Med., 7:177, July, 1966.

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Precautions, Side Effects: Occasionally mild abdominal discomfort, nausea or vomiting may occur with erythromycin, generally controlled by reduction of dosage. Mild allergic reactions (such as urticaria and other skin rashes) may occur. Serious allergic reactions have been extremely infrequent. Use sulfonamides with caution in patients with a history of allergy. Assure adequate fluid intake to prevent crystalluria and institute alkali therapy if indicated. If overgrowth of nonsusceptible organisms occurs, withdraw the drug and institute appropriate treatment. If a patient should show signs of hypersensitivity, appropriate countermeasures (e.g. epinephrine, steriods, etc.) should be administered and the drug withdrawn.

Adverse Reactions: Sulfonamide therapy may be associated with headache, nausea, vomiting, urticaria, diarrhea, hepatitis, pancreatitis, blood dyscrasias, neuropathy, drug fever, skin rash, injection of the conjunctiva and sclera, petechiae, purpura, hematuria and crystalluria.

Side effects due to erythromycin are infrequent, but occasional abdominal discomfort, nausea, or vomiting, urticaria and other skin rashes may occur.

Supplied: The Granules for Oral Suspension come in bottles of 60 ml. and 150 ml. The Chewable tablets are in bottles of 50. Each 5-ml. teaspoonful of reconstituted Granules or each Chewable tablet provides erythromycin ethyl succinate equivalent to 125 mg. of erythromycin activity and 167 mg. of each of sulfadiazine, sulfamerazine and sulfamethazine. 701358

ABBOTT

Tandearil®
oxyphenbutazone

Therapeutic Effects: Tandearil is a nonhormonal compound which may rapidly resolve inflammation and help restore normal joint function. Its action does not affect pituitary-adrenal function or impair immune responses. Its value in osteoarthritis is especially noteworthy because this disorder responds inconsistently to steroids and is often resistant to salicylates. Further, indomethacin is limited only to osteoarthritis of the hip, whereas oxyphenbutazone is effective in all forms of the disease.

Contraindications: Edema; danger of cardiac decompensation; history or symptoms of peptic ulcer; renal, hepatic or cardiac damage; history of drug allergy; history of blood dyscrasia. The drug should not be given when the patient is senile or when other potent drugs are given concurrently.

Warning: If coumarin-type anticoagulants are given simultaneously, watch for excessive increase in prothrombin time. Pyrazole compounds may potentiate the pharmacologic action of sulfonylurea, sulfonamide-type agents and insulin. Carefully observe patients receiving such therapy. Use with great caution in the first trimester of pregnancy.

Precautions: Obtain a detailed history and a complete physical and laboratory examination, including a blood count. The patient should be closely supervised and should be warned to report immediately fever, sore throat, or mouth lesions (symptoms of blood dyscrasia); sudden weight gain (water retention); skin reactions; black or tarry stools or other evidence of intestinal hemorrhage. Make regular blood counts. Discontinue the drug and institute countermeasures if the white count changes significantly, granulocytes decrease, or immature forms appear. Use greater care in the elderly and in hypertensives.

Adverse Reactions: The most common are nausea, edema and drug rash. The drug has been associated with peptic ulcer and may reactivate a latent peptic ulcer. Infrequently, agranulocytosis, or a generalized allergic reaction may occur and require withdrawal of medication. Stomatitis, salivary gland enlargement, vomiting, vertigo and languor may occur. Leukemia and leukemoid reactions have been reported but cannot definitely be attributed to the drug. Thrombocytopenic purpura and aplastic anemia may occur. Confusional states, agitation, headache, blurred vision, optic neuritis and transient hearing loss have been reported, as have hyperglycemia, hepatitis, jaundice, and several cases of anuria and hematuria. With long-term use, reversible thyroid hyperplasia may occur infrequently. Moderate lowering of the red cell count due to hemodilution may occur.

Dosage in Osteoarthritis: The initial daily dosage in adults is 300-600 mg. in divided daily doses. When improvement occurs, dosage should be decreased to the minimum effective level; this should not exceed 400 mg. daily, and is often achieved with only 100-200 mg. daily.

For complete details, please refer to full prescribing information. 6562-VI(B)R

Availability: Tablets of 100 mg.

Geigy

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Division of Geigy Chemical Corporation
Ardsley, New York

Geigy

Tandearil®
oxyphenbutazone

helps osteoarthritic joints move again

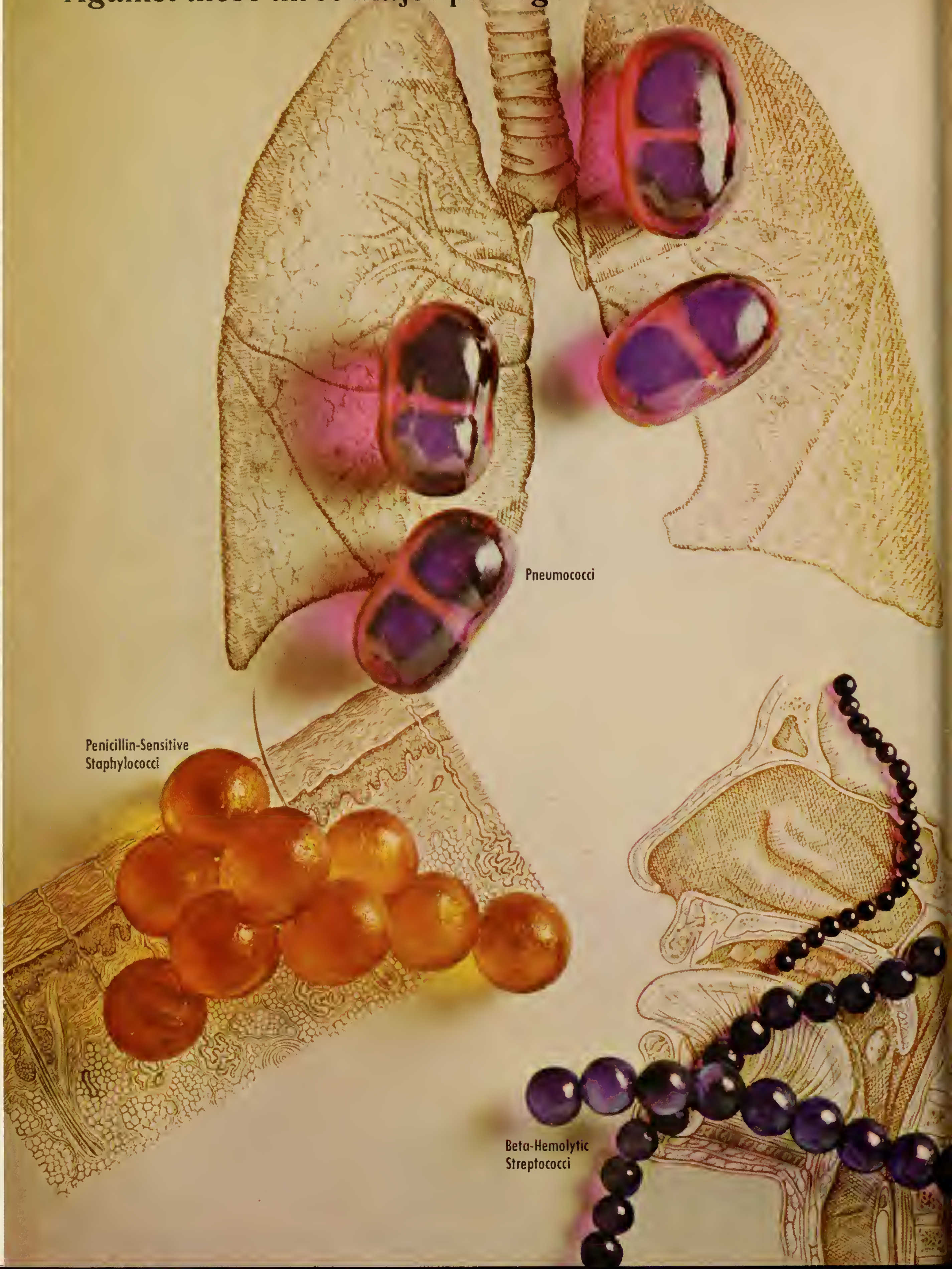
3 out of 4 osteoarthritics completely or markedly improved

Sperling, I.L.: 3 Years' Experience with Oxyphenbutazone in the Treatment of Rheumatic Disorders, Applied Therapeutics 6:117, 1964.	76.9% of 407 patients
Watts, T.W., Jr.: Treatment of Rheumatoid Disorders with Oxyphenbutazone, Clin. Med. 73:65, 1966.	84.6% of 39 patients

Please see adjoining page for brief prescribing summary.

TA-4919 PC

Against these three major pathogens...


Pneumococci
Penicillin-Sensitive Staphylococci
Beta-Hemolytic Streptococci

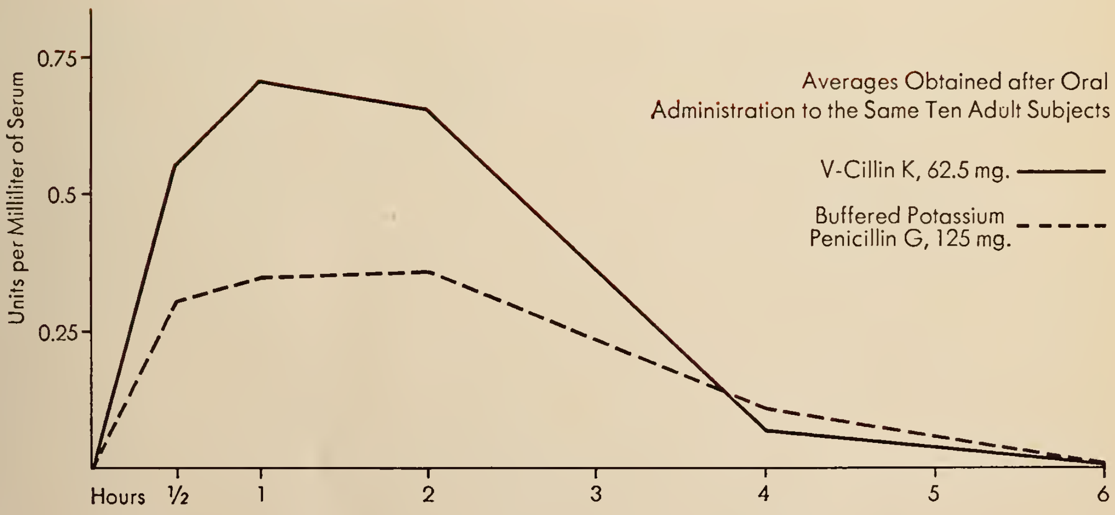
V-Cillin K® provides dependable oral antibacterial activity

because it combines a high degree of in-vitro activity...

Antibiotic	Staph.Aureus (Penicillin-Sensitive) MIC (mcg./ml.) Median	Range	Streptococcus, Group A MIC (mcg./ml.) Median	Range	Diplococcus Pneumoniae MIC (mcg./ml.) Median	Range
Penicillin V	0.02	0.02-0.04	0.02	0.003-0.4	0.01	0.005-0.2
Penicillin G	0.02	0.005-1.6	0.005	0.002-0.2	0.02	0.01-0.1
Methicillin	1.6	0.4-6.3	0.2	0.1-0.4	0.2	0.1-1.6
Oxacillin	0.4	0.1-3.1	0.04	0.02-0.4	0.1	0.04-0.8
Cloxacillin	0.2	0.2-0.8	0.1	0.1-0.8	—	—
Nafcillin	0.4	0.2-0.8	0.04	0.02-0.1	0.02	0.02-0.2
Ampicillin	0.2	0.1-0.8	0.02	0.01-0.04	0.02	0.01-0.04

Adapted from Klein, J. O., and Finland, M.: New England J. Med.,269:1019, 1963.

with high blood levels, even in the presence of food



Adapted from Griffith, R. S., and Black, H. R.: Current Ther. Res., 6·253, 1964.

V-Cillin K® Lilly 700636

Potassium Phenoxymethyl Penicillin

(See next page for prescribing information

New 500 mg. tablets...a more convenient way to give high doses

Description: V-Cillin K is the potassium salt of V-Cillin® (phenoxymethyl penicillin, Lilly). This chemically improved form combines acid stability with immediate solubility and rapid absorption. Higher serum levels are obtained more rapidly with this penicillin than with equal oral doses of penicillin G. The higher serum levels and acid stability of V-Cillin K make it a more dependable penicillin for oral use.

V-Cillin K, Pediatric, is an oral solution of clinically proved V-Cillin K in teaspoon dosage form. When mixed as directed, each 5 cc. (approximately one teaspoonful) will contain 125 mg. (200,000 units) phenoxymethyl penicillin as the potassium salt.

Indications: V-Cillin K has been shown to be effective in the treatment of streptococcus, pneumococcus, and gonococcus infections as well as infections caused by sensitive strains of staphylococci. It may be used for the prophylaxis of streptococcus infections in patients with a history of rheumatic fever and for the prevention of bacterial endocarditis after tonsillectomy and tooth extraction in those patients with a history of rheumatic fever or congenital heart disease.

Contraindication: V-Cillin K should not be administered to a patient with a history of penicillin hypersensitivity.

Warnings: In rare instances, the use of penicillin may cause acute anaphylaxis which may prove fatal unless promptly controlled. This type of reaction appears more frequently in patients with a history of sensitivity reactions to penicillin and in those with bronchial asthma or other allergies. Resuscitative drugs should be readily available for emergency administration. These include epinephrine and pressor drugs (as well as oxygen for inhalation) for relief of immediate allergic manifestations and antihistamines and corticosteroids for delayed effects.

Precautions: V-Cillin K should be used cautiously, if at all, in a patient with a strongly positive history of allergy.

In prolonged therapy with penicillin, and particularly with high parenteral dosage schedules, frequent evaluation of the renal and hematopoietic systems is recommended.

In suspected staphylococcus infections, proper laboratory studies (including sensitivity tests) should be performed.

The use of penicillin may be associated with the overgrowth of pencillin-insensitive organisms. In such cases, its administration should be discontinued, and appropriate measures should be taken.

Adverse Reactions: Although serious allergic reactions are much less common with administration of oral penicillin than with intramuscular forms, manifestations of penicillin allergy may occur.

Penicillin is a substance of low toxicity, but it does possess a significant index of sensitization. The following hypersensitivity reactions associated with the use of penicillin have been reported: skin rashes ranging from maculopapular eruptions to exfoliative dermatitis; urticaria; and reactions resembling serum sickness, including chills, fever, edema, arthralgia, and prostration. Severe and often fatal anaphylaxis has occurred (see Warnings). Hemolytic anemia, leukopenia, thrombocytopenia, and nephropathy are rarely observed side-effects and are usually associated with high parenteral dosage.

Administration and Dosage: For Tablets V-Cillin K and for V-Cillin K, Pediatric, the usual dosage ranges from 125 mg. (200,000 units) three times a day to 500 mg. (800,000 units) every four hours. For infants, the daily dosage may be 50 mg. per Kg. of body weight divided into three doses.

Beta-hemolytic streptococcus infections without associated bacteremia may be treated with 200,000 to 400,0000 units three times a day. Therapy should be continued for a minimum of ten days to prevent development of rheumatic fever and/or other serious complications. Dosage for routine streptococcus prophylaxis in patients with a history of rheumatic fever or congenital heart disease may be 200,000 units once or twice daily. When such patients undergo tonsillectomy, tooth extraction, or other minor surgery, the prophylactic dose should be 500,000 units every six hours given two days prior to surgery and for two days postoperatively. If oral medication is not feasible on the day of surgery, parenteral therapy should be considered. Mild to moderately severe pneumococcus pneumonia has been treated effectively with 250 mg. every six hours.

In staphylococcus infections, 400,000 units or more should be given every six to eight hours in conjunction with indicated surgical procedures.

For gonorrhea in males, 500 mg. (800,000 units) every four hours for three doses may be employed; in females, 500 mg. every four hours for six doses are recommended. Refractory infections generally respond to a second treatment three to four days following completion of the first. Treatment of gonorrhea with severe complications should be individualized, with prolonged and intensive treatment. Patients with a suspected lesion of syphilis should have a dark-field examination before receiving penicillin and monthly serologic tests for a minimum of three months.

How Supplied: Tablets V-Cillin K, U.S.P., 125 mg. (200,000 units), in bottles of 50 and 100; and 250 mg. (400,0000 units) and 500 mg. (800,000 units), in bottles of 24 and 100.

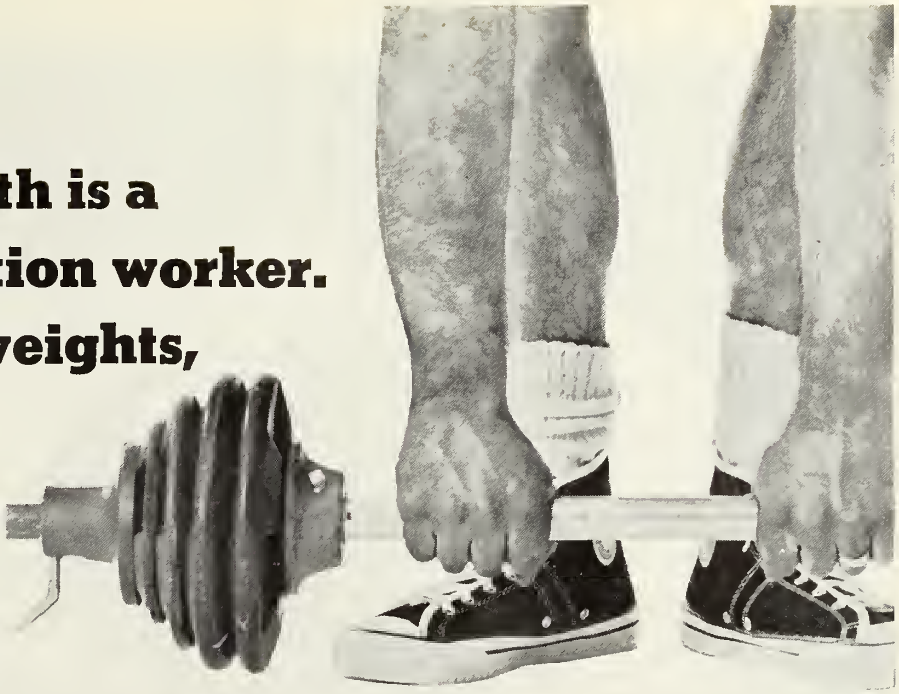
V-Cillin K, Pediatric, for Oral Solution, 125 mg. (200,000 units) per 5 cc. of solution, in 40, 80, and 150-cc.-size packages. [032067]

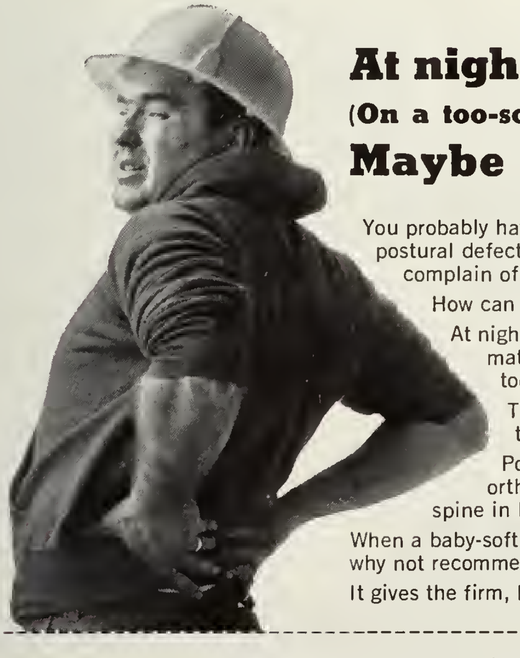
Additional information available to physicians upon request. Eli Lilly and Company, Indianapolis, Indiana 46206.

Lilly

700867

Fred Kurth is a construction worker. He lifts weights, plays a mean game of handball and was a pretty good wrestler in school.





At night he sleeps like a baby.
(On a too-soft mattress)
Maybe that's why his back hurts.

You probably have patients who are strong as a bull—who have no postural defects or spinal deformities—yet still complain of low back pains.

How can this happen to otherwise normal, healthy people?

At night, they may be sleeping like babies—on nice, soft, feathery mattresses that can do more harm than good. And this too-soft mattress can lead to morning backaches.

That's why so many doctors recommend (and sleep on!) the Sealy Posturepedic.

Posturepedic is designed in cooperation with leading orthopedic surgeons for firm support. Actually helps keep the spine in line, and tends to reduce muscle tension, too.

When a baby-soft mattress is giving patients low back pain, why not recommend the Sealy Posturepedic?

It gives the firm, level support many patients need.

As a doctor, you are invited to take advantage of a professional discount on the Sealy Posturepedic.

We believe your personal use will convince you of the Posturepedic's distinctive benefits and, we would hope, merit your valued recommendation.

The professional discount represents a minimum saving of $39 per set over the regular retail price for mattress and foundation. To receive your professional discount certificate, mail this coupon to Sealy, Inc., 666 North Lake Shore Drive, Chicago, Illinois 60611.

Please send me complete information on your professional discount.

E-7

Dr.________________________

Residence________________________

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antacid
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with a
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OF THE MOST WIDELY
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FOR RAPID
NEUTRALIZATION.
PLUS SIMETHICONE—
TO CONTROL
THE FACTOR WHICH
ANTACIDS ALONE
CANNOT INFLUENCE.

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- In Mylanta, aluminum and magnesium hydroxides are balanced to minimize the chance of constipation or laxation and still achieve rapid acid neutralization and pain relief.
- The positive action of simethicone helps relieve the painful gas symptoms which often accompany the peptic ulcer syndrome.
- The nonfatiguing flavor and smooth, nongritty consistency of tablets and liquid encourage continued patient cooperation during long-term therapy.

Composition: Each Mylanta chewable tablet or teaspoonful (5 ml.) of liquid contains: magnesium hydroxide, 200 mg.; aluminum hydroxide, dried gel, 200 mg.; simethicone, 20 mg. **Dosage:** one or two tablets, well chewed or allowed to dissolve in the mouth, or one or two teaspoonfuls of liquid to be taken between meals and at bedtime.

The Stuart Company, Pasadena, California
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ARTIFICIALLY SWEETENED CARBONATED BEVERAGE
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Diet-Rite Cola...America's Number One low-calorie cola... no sugar at all...less than one calorie per bottle...the one with the wonderful taste of cola...pH approximately 2.6 to 2.8...same general range acidity as other cola beverages plus number of fruit juices.

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when he just can't sleep

Tuinal®

One-Half Sodium Amobarbital and
One-Half Sodium Secobarbital
supplied in ¾, 1½, and 3-grain Pulvules®

Tuinal helps wakeful patients fall asleep fast, stay asleep all night.

Indications: Tuinal is indicated for prompt and moderately long-acting hypnosis. It is not suitable for continuous daytime sedation.

Contraindications: Barbiturates should not be administered to anyone with a history of porphyria, nor should they be given in the presence of uncontrolled pain, because excitement may result.

Warning: May be habit-forming.

Precautions: Tuinal should be used cautiously in patients with decreased liver function, since prolongation of effect may occur.

Adverse Reactions: Idiosyncrasy, such as excitement, hangover, or pain, may appear. Hypersensitivity reactions occur in some patients, especially in those with asthma, urticaria, or angioneurotic edema.

Overdosage: C.N.S. depression. Symptoms—Depression of respiration and of superficial and deep reflexes, slight constriction of the pupils (in severe poisoning, dilation), decreased urine formation, lowered body temperature, coma. Treatment—Symptomatic and supportive (gastric lavage; intravenous fluids; maintenance of blood pressure, body temperature, and adequate respiration). Dialysis may speed removal of barbiturates from body fluids.

Dosage: 50-200 mg. (¾-3 grains) at bedtime.

[031767]

Additional information available to physicians upon request.
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Complete facilities for evaluation of and intensive treatment of psychiatric patients, including individual psychotherapy, group therapy, psychodrama, electro-convulsive therapy, Indoklon convulsive therapy, drugs, social service work with families, family therapy, and an extensive and well organized activities program, including occupational therapy, art therapy, athletic activities and games, recreational activities and outings. The treatment program of each patient is carefully supervised in order that the therapeutic needs of each patient may be realized.

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It stands to reason. They all go through the same training; they all have to pass the same tests; they all have to measure up to the same standards; they all are underpaid, too. Therefore, all interns are alike.

That's utter nonsense, of course. But it's no more nonsensical than what some people say about aspirin. Namely: since all aspirin is at least supposed to come up to certain required standards, then all aspirin tablets must be alike.

Bayer's standards are far more demanding. In fact, there are at least *nine specific differences* involving purity, potency and speed of tablet disintegration. These Bayer® standards result in significant product benefits including gentleness to the stomach, and product stability that enables Bayer tablets to *stay* strong and gentle until they are taken.

So next time you hear someone say that all aspirin tablets are alike, you can say, with confidence, that it just isn't so.

You might also say that all interns aren't alike, either.

BAYER
ASPIRIN
FAST PAIN RELIEF

ORANGE FLAVORED
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ASPIRIN
CHILDREN

in chronic illness

B and C vitamins are part of therapy: An imbalance of water-soluble vitamins and chronic illness often go hand in hand. STRESSCAPS capsules, containing therapeutic quantities of vitamins B and C, are formulated to meet the increased metabolic demands of patients with physiologic stress. In chronic illness, as with many stress conditions, STRESSCAPS vitamins are therapy.

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FOR PROFESSIONAL RECOMMENDATION ONLY

Each capsule contains:

Vitamin B_1 (as Thiamine Mononitrate)	10 mg
Vitamin B_2 (Riboflavin)	10 mg
Vitamin B_6 (Pyridoxine HCl)	2 mg
Vitamin B_{12} Crystalline	4 mcgm
Vitamin C (Ascorbic Acid)	300 mg
Niacinamide	100 mg
Calcium Pantothenate	20 mg

Recommended intake: Adults, 1 capsule daily, for the treatment of vitamin deficiencies. Supplied in decorative "reminder" jars of 30 and 100; bottles of 500.

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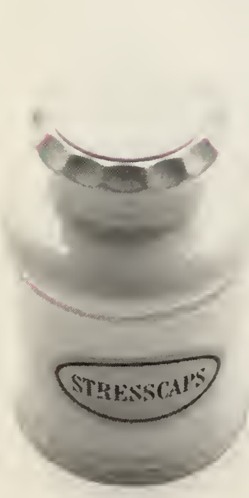

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Maybe he doesn't know when he's well off. But you might want to prescribe long-acting Novahistine LP anyway.

Two tablets in the morning and two in the evening will usually provide day and night relief by helping to clear congested air passages for normal, free breathing. Novahistine LP is formulated to provide continuous therapeutic effect for 8 to 12 hours. The decongestant ingredients help restore normal mucus secretion and ciliary activity—physiologic defenses against infection of the respiratory tract.

Use cautiously in individuals with severe hypertension, diabetes mellitus, hyperthyroidism or urinary retention. Caution ambulatory patients that drowsiness may result.

Each Novahistine LP tablet contains: phenylephrine hydrochloride, 25 mg., and chlorpheniramine maleate, 4 mg.

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quick relief
that lasts
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Lilly

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The Journal
of the
South Carolina Medical Association

VOLUME 63 July, 1967 NUMBER 7

THE TOPICAL USE OF FLUOROURACIL IN THE TREATMENT OF CANCERS AND PRECANCERS*

J. RICHARD ALLISON, JR., M. D.
Columbia, S. C.

This presentation is to relate my experiences of nearly three years with the topical use of Five Fluorouracil. I have found it to be a tremendous and exciting addition to our armamentarium and the best method for treating widespread premalignant keratoses and selected superficial carcinomas.

Since the synthesis of Five Fluorouracil (5FU) in 1957, it has been found to be a antimetabolite of widespread use. It has been on the market, supplied in a 10ml ampule of 5% concentration, for intravenous use. Dillaha *et al* were the first to report on its topical use in the dermatological literature and shortly before this through personal communication with them I began selective patient studies with its use.[1] Approximately 300 patients have been treated, some on several occasions by me since then.

At first the 10ml ampule of 5FU was mixed with 20 grams of aquaphor to make a 2½% concentration. Later communications from Dillaha suggested the use of propylene glycol so that the concentration is only 1%, but this is just as effective as the higher concentration in an ointment base. In addition, the application is easier and more cosmetically suitable, therefore, the patient acceptance is better.

I have had the pharmacist mix this and dispense it in one-half ounce bottles containing approximately 10ml each. The patient applies the medication twice daily with the finger tips to all involved areas and surrounding skin. It is rubbed in for approximately 15 seconds after first washing with soap and water. When and where indicated the patient may apply powder or make-up, etc. directly on top of this. The medication is to be discontinued when an area becomes uncomfortably irritated and the patients are told to stop it in one area and continue it in another according to these directions. Generally speaking the more far advanced or active the lesion, the quicker it becomes irritated. This varies from one to three weeks. Creases and folds such as the nasolabial areas are to be avoided. Inflammatory conditions such as seborrheic dermatitis should be cleared up first with routine therapy.

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*Paper presented before the Columbia Medical Society February 13, 1967.

**Five Fluorouracil, Hoffman-LaRoche Incorporated

Following the inflammatory reaction the areas return to normal in three to six weeks without therapy. A big advantage of this therapy is that the skin heals without a scar. In addition, subclinical lesions are brought out through the selective action of the medication. This is a striking and unique advantage. The treatment is most useful for these two reasons plus the avoidance of any type of more costly operative procedure. It does not work as well on skin away from the face but experience with occlusive dressings and higher concentration or both has given good results in some otherwise non-responsive cases.

The biggest disadvantage in its use is that many patients become alarmed at the inflammatory reaction, particularly when widespread subclinical lesions are present, despite being forewarned about this. Although there is usually no pain, tenderness and soreness may develop but this indicates the proper time for stopping therapy. The drug is a photosensitizer and during the time of its use the patients should protect themselves from sun exposure. Apparent failures, characterized by recurrences, may be treated a second time if judgment indicates it, but a more vigorous reaction should be obtained as recurrences are generally the results of failure to use the medication long enough. A two mm punch biopsy tool is an excellent aid for maintaining pathological control of the diagnoses before or after treatment as indicated.

Intraepithelial epitheliomas, or Bowen's disease and erythroplasia of Queyrat respond nicely. My experience with leukoplakia has been too limited for conclusions except to note that some do and some do not respond. Some keratoacanthomas may regress faster. The hard, dry lesions on the backs of the hands respond poorly. Patients with xeroderma pigmentosum and radiodermatitis are frequently helped. Basal cell cancers respond poorly and 5FU is not the treatment of choice for these even when superficial. However, in inoperable eroding basal cells, it was in one case a great aid in stopping the surface erosion and drainage and thereby making the nursing care and cosmetic considerations better. Frequently in patients with the entire face covered with premalignant, malignant, and non malignant lesions, the drug has been of great use to clear up all premalignant lesions and superficial cancers of the squamous variety, leaving basal cell cancers and benign seborrheic keratoses to be treated by other methods. It is not suitable for rapidly growing and invasive squamous cell cancers in my experience.

Its mode of action is through its antimetabolite action for uracil, blocking synthesis of DNA and RNA, with the more rapidly growing malignant and premalignant cells picking up the drug first and in greater quantities and in effect becoming poisoned before normal tissue is affected. It likewise will inhibit wound epithelialization but has no effect on normal skin unless its epidermal condition is altered to permit its passage.[2]

No toxic systemic effect has been found in three to four years of use by many investigators.[3] Studies including radioactive C-14 labeled drug would seem to have predicted this. The 1000 mg per day permissable dose is not even approached since usually only 200 mg are dispensed for use over a three weeks period. My correspondence with the Food and Drug Administration in reference to its use has therefore been interesting and disappointing.

It has been my contention that this is not a new drug but just a different method of administering an approved one and therefore official permission was not needed in these investigations since there was already enough material and evidence on hand to guide us in this new approach. However, after using 5FU for some six months, I wrote to the FDA requesting official permission to use the drug if this were needed in light of the above mentioned facts. I started correspondence with the FDA in March of 1965 and received permission to use it in August of 1965. In July of 1966 I received notice that detailed and complex animal studies should be done and a request was made for "the method of synthesis of the new drug substance, and to its specifications and test methods, be submitted."

Somehow I, and others, have not been able to get through to the FDA that this is not a "new drug substance" but one already available and approved for intravenous use. Attempts to get the manufacturer to carry through with these complex FDA studies have now met with success as correspondence with Hoffman-LaRoche Inc. in August of 1966 indicated.[4]

In summary, topically used 5FU has proved to be the best method for treating widespread premalignant and selected malignant lesions of the skin, offering many advantages over past methods of therapy. It is a new tool for the physician and like all tools is no better than the skill of the user and his judgment as to where, and when, and how, to use it.

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2. Waldrop, D. S., Engel, M. D., and Van Scott, E. J., Inhibition of wound epithelialization by topical five fluorouracil, Arch Derm 94:786-789, 1967.
3. Blank, H., Progress in Dermatology. Vol. 1, Nov. 1966.
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Studies in lead poisoning—S. Selander, K. Cramer, and L. Hallberg. Brit J Indust Med 23:282-291 (Oct) 1966.

Fifteen workers with lead poisoning of varying degrees were treated with penicillamine given by mouth. The effect on symptoms and pathological laboratory values was satisfactory, side effects were generally mild, and the drug is considered to be a good alternative to calcium disodium edetate which must be given intravenously. Previous studies on the reliability of different laboratory tests in evaluating the degree of lead poisoning and the effect of the therapy were extended with special respect to the lead levels in the blood. The correlations between lead in blood and lead in urine, coproporphyrins in urine and lead excreted during treatment were of the same order as those found between ALA in urine and the same parameters. The correlation between the initial values of lead in blood and ALA in urine was very strong ($p < 0.001$); is also persisted during treatment. Penicillamine is efficient and useful in the treatment of lead poisoning. Determinations of lead in blood and ALA in urine are equivalent as expressions of lead poisoning, provided that the lead level in blood is not temporarily raised because of an acute exposure.

MEDICAL SCHOOLING IN SOUTH CAROLINA. XIII.

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KENNETH M. LYNCH, M.D., D.Sc., LL.D.
Charleston, S. C.

The Master Plan and its enabling and costly Expansion Program that were developed for the Medical College of South Carolina in the early 1940's, and have pursued a progressive and successful course ever since, except for some delay during the period of 1961-1966, were opposed by certain elements of the medical profession and the press of Charleston as unnecessary and unsound. However, the foresight, the need and the worth of the entire proposition have been more than justified by the accomplishments and emphasized by the conditions and the demands of the present. Not only is there general support for the phase just now being entered upon (1967), but there is demand for even further expansion of production of health and medical personnel—all promoted by the same public press as if it were something newly proposed.

As was expressed over ten years ago in a report to the South Carolina Medical Association, "By its very nature there can never be a finishing point." From the present view, however, any further expansion beyond what is already accomplished or contemplated will be in the nature of extensions from the basic framework. The principles will not change, whether or not their application does in accordance with developments in a changing world.

With the Medical College Hospital—the keystone of the entire medical center conception—assured in 1947, the structure of an appropriate functional and operational organization, as already planned, had to be developed by harmonious effort. The term "Medical Educational, Service and Research Center"—which we were one of the first to spell out, and which is now in general use in that form or some similar phraseology—has definite and significant meaning of purpose and functions. Such an organization might be considered to comprise two elements, although they are not separable—administration and faculty.

From its beginning in 1824, to 1913, the year the Medical College became a state institution, the Faculty had been the Administration. Even the Board of Trustees was in effect subsidiary. Moreover, the Faculty was in reality the Administration from 1913 to 1944 even though the Board of Trustees, established by law and having control over the Faculty, bore legal controlling responsibility.

Although the institution was not connected with any other of the State's several colleges or with any university, its chief administrative executive carried the title of Dean throughout its 89 years of proprietary operation and the first 36 years of state ownership, until 1949. In that first period (1824-1913) the deanship was rotated frequently among the faculty members and amounted merely to serving as presiding officer and spokesman. The dean did not even confer the degrees; that was done by the chairman of the Board of Trustees. All deans during both periods and up to 1944 were on a part-time basis—all being in private practice. Only during the period of state operation did the dean draw any salary from the institution.

The only other administrative officials of the College were a vice-dean, who had no status except as substitute in the dean's absence, and the "directors" of the schools of pharmacy and nursing. There was no separate director or dean of the School of Medicine.

The Master Plan of the 1940's recognized that the previous administrative setup was entirely inadequate to launch the Expansion Program contemplated and that success would require a strong central organization and a corps of competent and loyal administrative heads, dedicated to the proposed plan of development.

When the crucial time of guarantee of the building of the teaching hospital was successfully past, the Board of Trustees approved the change of title of the chief executive to "President of the Medical College and Dean of the Faculty," in 1949. The Board of its own accord added the second part of the title, "Dean of the Faculty"; it has been dropped for succeeding administrations.

While the change of title from dean to president was literally just a change of words, it really meant much more than that. Immediately it established the same prestige for the chief executive of the Medical College as was enjoyed by the heads of the other five state institutions of higher learning of South Carolina, and therefore elevated the status of his institution. Furthermore, it signified more definite and centralized authority and responsibility, in the minds of the Board of Trustees, the faculty, the profession, the government, the people of South Carolina—and even to the many interested observers of the Expansion Program generally.

It was apparent that an emergency situation existed that required the transformation of an outmoded organization and system of operation of a medical school with inadequate facilities into the contemplated form of health and medical center complex. If this were to be done in time to be counted in the vanguard of that movement throughout the country, it was essential that administrative leadership take a role of "benevolent dictatorship." That label, applied more than once by upper echelon educational authorities, is here acknowledged as a compliment of the highest order, although the phrase was not ever in mind during the time. Rather, the philosophy and the course pursued were simply natural, and without thought of self-analysis; they followed a *maxim* that was later so aptly expressed by Winston Churchill — "administration with a firm hand, in tolerance, patience and calm."

It was definitely in mind all the way, however, that the best long-range prospects for higher education in South Carolina, including the position of the Medical College, lie in establishing unification of all the State's institutions of higher learning — the development of a real "State University System."

Resting among the voluminous records by which this narrative is documented is a bulky file on the effort made in 1952 to bring about "a voluntary cooperative organization among the state institutions of higher learning." After a period of encouraging discussion of that proposition with the State's leaders in education and government, the presidents of the other five State institutions came by invitation to a conference at the Medical College on October 1, 1952. At that meeting articles that had been prepared on organization and procedure were unanimously adopted for the creation of a "South Carolina Council of Higher Education." A place and time for activation of the agreement were set, and the president of one of the other institutions was selected as chairman. That meeting was never called; the labor of that conception produced a stillbirth.

In the meantime the subject has had the interest of more than one governor and of government-sponsored commissions, and just as this article is being written, April 21, 1967, the newspapers report the passage of a Legislative Act to "establish a powerful new state commission of higher education" . . . to "supervise and guide state-supported colleges and universities," and the report specifically includes "the S. C. Medical College." The Act was ratified May 2, 1967. The educational institutions have lost leadership control in their own field.

Just as may happen in any such enterprise when there occurs an abrupt change of administration, particularly if prepared guidelines of procedure are broken, there came a halt in the Expansion Program in the 1960's. For about five years the Medical College suffered a period of floundering following the mandatory retirement of its president on

July 1, 1960, under the State Retirement law.

The Board of Trustees weakened in its control of planned procedure, and fragmented itself. Firm leadership was lacking. Political interests and government officials took charge. Investigations and surveys were made. A business firm of "executive specialists" was employed to find a president. That was not merely a failure—it was a mistake, of course. Authority broke down. Bickering in the faculty occurred; individual power seekers and cliques became bold. Newspapers seized opportunity to publish front-page distortions and "sensationalism" (Editorial, *Journal of the South Carolina Medical Association,* March 1965) fed them by unnamed "spokesmen." Loyal alumni, supporters, and friends became confused. The "image" of the institution, so carefully wrought through two decades, was damaged to national, state and local view.

However, continuation of the course of the Expansion Program has now been resumed under the direction of William M. McCord, Ph.D., M.D., as president, with a newly constituted Board of Trustees (July 1, 1966) and a corps of new vice-presidents and deans, as well as a number of changes in the faculty.

Previous to 1949 the only medical school whose chief executive bore the title of president was apparently the Medical College of Virginia, which also is an institution owned and operated by the state without the protective shelter of university connection. The heads of all independent private medical colleges were still titled dean, but now all of these have presidents. Even a few of the medical colleges connected with universities now have presidents, while practically all of the others which have followed the course of developing the "health and medical educational, service and research center" have established an office of vice-president in overall charge.

Following the change of title of the chief administrative officer of the Medical College from dean to president, that of the head of the Board of Trustees was changed from president to chairman, and in 1952 legislation was secured by which the name of the institution reverted to its original form (of 1824), the Medical College of South Carolina. It had borne the title of Medical College of the State of South Carolina ever since the second charter (1832).

Furthermore, the title of the heads of the schools of pharmacy and nursing was changed from director to dean, and a deanship was provided for the School of Medicine in 1950. It was also established that as other schools contemplated in the Plan became fully organized, each would have a dean. The School of Graduate Studies was initiated in 1949 under the direction of a "Chairman," Dr. F. W. Kinard, whose title was not changed to dean until 1965, while the School of Dentistry, authorized in 1953, is just now being organized under its new Dean, Dr. John E. Buhler. Although the College has operated training courses in medical technology in the departments of pathology and radiology for many years, all such technical curricula are now being centralized under a separate school organization. Establishment of a School of Public Health, as contemplated in the original Plan, has not yet been initiated.

As an introduction of the long-range plan of university-type reorganization, a position of Vice-President of the College was established in 1959, and Dr. John T. Cuttino appointed. That position lapsed when Dr. Cuttino was made Acting President, July 1, 1960, to February 4, 1962, but has now been restored in the title of Dr. Franklin C. Fetter, Vice-President for Academic Affairs and Dean of the School of Medicine. When the Medical College Hospital was being organized, Mr. Glenn D. Searcy became Superintendent. Since the hospital would be operated primarily as a teaching institution, a position of "Dean of Clinical Medicine," in lieu of the usual "Medical Director," was created for supervision of the clinical teaching program and professional care service. Dr. Vince Moseley, a full-time professor of medicine, held that position until 1966, when he became Chief of Medical Service in the staff organization of the new Veterans Administration Hospital affiliated with the Medical College.

A number of administrative changes have been made during the last year and a half. These appear consistent with the expansion of operations and with the trend at most medical schools.

Development of the Master Plan called for Faculty adjustments along with reorganization in Administration, not secondary to it but in a material sense dependent upon Administration to provide the means. Only by dedication to the ideology advanced and by harmonious teamwork could success be attained. It was a rich experience to be associated with such a body of dedicated people—scientists, teachers, department administrators, students and employees—who provided the spirit of the Medical College of South Carolina for one of the most crucial periods in its history.

Up to 1937 the only full-time (vocational) teachers in the faculty were in the basic science departments — anatomy, chemistry, physiology, pharmacology and pathology. These departmental staffs were then limited by financial conditions to two or three members each. There were also two salaried teaching members in the clinical service laboratories (clinical pathology) as well as in the pharmacy and nursing schools. The clinical staff, composing a relatively large majority of the faculty, were all private practitioners—on what is now called a voluntary basis. Some of the staff of the laboratory departments also held outside positions.

In 1937 Dr. John A. Boone (now professor and chairman of the department) was brought in as a full-time instructor in medicine, and later in that year full-time professorships in medicine and surgery were established. To these positions Dr. William H. Kelley was appointed in medicine and Dr. Frederick E. Kredel in surgery, but at first with the rank of associate professor. This was 119 years after the University of Virginia established the first full-time professorship of medicine in this country, 94 years after the University of Chicago established five full-time clinical professorships and 114 years after James Moultrie, Jr. advocated salaried professorships for South Carolina in the first "Memorial" to the Legislature requesting a medical school charter here. Dr. Kelley and Dr. Kredel were elevated to full professorship in 1939 and were promised department chairman rank, but that did not materialize until the incumbent holders resigned in 1942-43. One of the awkward situations arose immediately; the Roper Hospital was then the only teaching hospital affiliated with the Medical College, and by long-standing arrangement the professors of medicine and of surgery were automatically physician-in-chief and surgeon-in-chief, respectively, of Roper. In the "Town and Gown" situation—already acute, by reason of launching of the Medical College Expansion Program—the berths of Dr. Kelley and Dr. Kredel were not made comfortable until the Medical College Hospital opened in 1955, when some relief was given by appointment of private practitioners to the Roper posts.

In 1949, as the Program of the Medical College was unfolded, full-time professorships were established in obstetrics-gynecology, pediatrics and neuropsychiatry. Private practitioners who were already of professorial rank in these departments were appointed as professors and department chairmen, Dr. Lester A. Wilson, Dr. Mylnor W. Beach and Dr. Olin B. Chamberlain, respectively. In the full-time plan established for modernization of the clinical departments, all of those men were furnished offices and services for "referral practice" in the area that is now occupied by the Department of Pharmacology in the old Medical College quadrangle. Eventually all clinical departments were moved into the Medical College Hospital. None of these first full-time professors of the clinical departments is still in service, and only one of the original faculty of 1913 is still around—its first full-time member.

In the plan of faculty reorganization, such titles as "lecturer" and "adjunct" were eliminated and the prefix "clinical" was established in the titles applied to all members of the teaching staff in private practice, i.e., those who donated their services. The titles of graded teaching ranks were further simplified and standardized—instructor, associate, assistant professor, associate professor and professor—while the term "chairman" was established in the title of the heads of the departments.

The process of rebuilding the faculty in all schools of the College went forward deliberately, as planned, and in consideration of the conditions, i.e., as the physical facilities were made ready, student enrollment increased, and appropriations for construction, equipment, campus expansion, and operational expenses secured.

In the faculty reorganization the ultimate objective was a complete full-time faculty, with continuation of voluntary members (private practitioners) as an eminently important part of the clinical faculty, but on a selective basis and not merely for numbers. In recognition of the demand for production of more doctors—meaning more well-qualified general practitioners—a professorship of general practice was established in 1959, and Dr. George G. Durst was appointed on a voluntary basis. It was hoped that the creation of this chair would lead to a revival of interest in private practice of general medicine. Although the trend toward strict specialization was increasing before World War II, it was given such a post-war boost that the family doctor—by whatever title he may be designated—has become comparatively rare. A great many of the medical officers grasped the opportunity offered to specialize as they came out of military service. The scarcity of doctors in civilian practice during the war became a fixed situation—or worse—afterwards, so far as general practice is concerned. This will not be different so long as the demand exceeds the supply. Because of the complexities of the situation it can't be quickly improved, but it would be a step in the right direction to carry out the original idea of establishing a full-fledged department of general practice, with at least a part-time salaried staff—not just voluntary—although serving in the field of outside practice, as well as intramurally.

However, it was accepted that in the limited specialties, at least during a transition period, a sub-department might be staffed by voluntary members as long as that service was satisfactorily covered for approved residency training. As the Hospital went into full operation, the only departments staffed entirely by voluntary members were ophthalmology, otolaryngology and orthopedics. The first two of these have since of their own volition become staffed on a full-time basis.

By 1960 the faculty reorganization structure was completed, with the exceptions as noted above. The full-time faculty of the School of Medicine comprised 15 department chairmen (8 of whom were graduates of other schools), 19 professors, 19 associate professors, 18 assistant professors and 48 teaching staff of the lower grades. Faculty changes since 1960 have been of the nature of replacements, promotions and additions within the established structure.

In any further enlargement of the faculty or of the administrative staff that may subsequently be made, the history of the movement by which the Expansion Program was secured should not be neglected. The importance to the well-being of the Medical College of South Carolina of maintaining close relationship with the medical and health professions concerned, and the pledges made to them as well as to government and to the people at large, cannot be overemphasized. As Sir Winston Churchill said, "The longer you can look back, the farther you can look forward."*

*Quotation furnished by Miss Mildred Robertson, University of Texas.

THE THORACIC AORTA

PART II. COARCTATION

R. RANDOLPH BRADHAM, M. D.*
WILL C. SEALY, M. D.**

Aortic coarctation commonly occurs just below the left subclavian artery at the junction of the aorta with the ductus; but reference need only be made to the embryology of the aortic arch and its branches to understand the variations that occur in coarctation of the aorta. These changes in the early embryo are brought about by the loss or interruption of the arches and portions of the aorta and by change in size of certain vessels as well as the new formation of others.

The etiology of coarctation of the aorta is as yet theoretical but there is good evidence that there is a close relation between the ductus arteriosus and the coarctation, regardless of the patency of the latter. An extension of the collagen-rich, elastin poor, fibrous tissue of the ligament has been found from the point of insertion of the ligament around the whole of the stenotic aorta. Brom[2] recently referred to Wielenga's investigations in which he cut serial sections through specimens resected from patients with coarctation of the aorta. Wielenga found that the fibrous tissue of the ligamentum arteriosus did not end at the insertion of the ligament in the aorta, but could be followed through the aortic wall. It encircled the aorta at the site where the coarctation was localized. This ductus tissue has also been found in normal aortas, but there it is limited only to the place of insertion of the ligament.

There is also the stress and strain theory that in intrauterine life there is a slight shift in the point of separation of the blood streams to the upper and lower extremities and that this is sufficient to cause a decrease in the flow of blood through the aorta.

Classification

From a surgical point of view it is not only important to classify patients into preductal (infantile) and postductal (adult) groups but also to categorize them as to associated hypoplastic segments of the aorta, cardiac anomalies, abnormalities of the branches of the aorta, aneurysms, and amount of collateral circulation. There is also great variation in the degree of narrowing. All of these factors are important in timing operative correction, planning an operative approach, and wisely staging multiple procedures which might be necessary.

Preductal (Infantile) The coarctation occurs above the point of entrance of the ductus arteriosus. It may exist as a diffuse narrowing of the isthmus between the left subclavian artery and the point of entrance of the ductus arteriosus. Because of this anatomical arrangement, collateral circulation is poorly developed and early cardiac decompensation may occur in infancy. If the ductus remains patent, severe pulmonary hypertension develops as the right ventricle must support systemic flow to the lower trunk, lower extremities, and abdominal viscera. The operative mortality in this variety is extremely high because of the markedly increased pulmonary arterial resistance. Another factor in the poor prognosis of this group is the high incidence of associated cardiac anomalies, noted as 40% by Gerbode and associates.[4]

Postductal (Adult) There is usually a localized constriction occurring just beyond the entrance of the ductus into the aorta. This type is usually an isolated anomaly, readily compatible with life, and accompanied by the early development of adequate collateral circulation around the obstruction. Operation can be done electively with good results.

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Treatment

Operative correction is indicated because of (1) Systemic hypertension with its usual associated sequelae, (2) Changes at the site of the coarctation such as aneurysm formation and the arteriosclerotic plaques that develop in adult life, and (3) the development of sub-acute bacterial endocarditis in the area of the coarctation. It is also interesting that approximately 15% of the patients with coarctation will have bicuspid aortic valves and insufficiency, 20% have a cerebral arterial aneurysm, and 10 to 15% of the female patients have agenesis of the ovaries.

The first successful surgical correction for coarctation of the aorta was performed by Crafoord on October 19, 1944. Shortly thereafter on October 31, 1944, he performed the operation successfully again.[3] On July 6, 1945, Gross also successfully resected a coarctation in a 12 year old girl.[6] The original operative approach advocated by Crafoord and Gross has undergone little change.

The optimal ages for elective correction of coarctation of the aorta that is uncomplicated by other anomalies, congestive failure, and endocarditis is in the range from 8 to 20 years. Certainly there should be no strict adherence to performing operation during these ages as circumstances are often such that operation is indicated in infancy and adult life. Congestive heart failure in infancy may make operation mandatory. Unfortunately, in some, problems other than a preductal coarctation such as cardiac anomalies and fibroelastosis may be the major cause of decompensation. In adults, particularly the hypertensives, because the fragility of the great vessels may interfere with dissection, it is sometimes helpful to use blocking agents such as trimethaphan or halothane anesthesia both of which can be used to induce hypotension and maintain the systemic blood pressure in the range of 120 mm Hg systolic. This, however, on theoretical grounds, would leave the cord subject to ischemia with low pressure in the collaterals. To offset this, hypothermia to 34° C. is an added safeguard, especially when it is necessary to occlude the left subclavian for resections of high coarctations.

There are numerous technical considerations regardless of the type of repair to be done. The surgeon should remain aware of "Abbott's artery," which is a vessel that sometimes arises from the posterior wall of the aorta or left subclavian artery and varies greatly in size. It probably is a vestigial remnant of the fifth branchial arch artery. Aneurysms, frequently of the intercostals extending into the aortic wall, are sometimes associated with coarctation and must be manipulated with care because of their thin walls. Schuster and Gross[8] in reviewing 505 cases of coarctation, found that 45 of these patients had a total of 57 aneurysms. The aneurysm may be saccular or fusiform and handling this additional clinical problem is dependent upon the location in relationship to the coarctation.

1. Resection and end-to-end anastomosis.

The most commonly performed operation is resection of the coarcted aorta with reunion of the aorta by an end-to-end anastomosis, since the coarcted segment in the majority is well localized, involving less than one centimeter of the aorta. In infants and children longer segments than this can be bridged by mobilization. A generous left posterolateral thoracotomy through the fourth interspace allows adequate exposure. A thorough inspection of the area before the pleura is opened and the tissues stained often clarifies the arrangement of the aorta, its branches and the presence of associated aneurysms. The pleura is then opened through a long vertical incision carried well up on the left subclavian artery and inferiorly well below the coarctation. Mobilization of the proximal and distal aorta, subclavian artery, and ductus is then accomplished with great care to avoid damage to the friable, thin walled intercostal arteries and other collateral vessels. Division of a ductus or ligament enhances mobilization of the aorta. The intercostal arteries can be most difficult to control as they are friable, tortuous and sometimes are the seat of aneurysms. As many as possible should be saved as there may be an aberrant blood supply to the cord which can result in neurologic changes when the aorta is cross clamped. Unless unusual circumstances are present, no more than the first two pairs plus the branchial arteries should be sacrificed. Tapes are then passed around the proximal and distal aorta; and with gentle traction, the posterior surface is dissected from the vertebral column. Noncrushing vascular clamps are placed above and below the coarcted segment in such a way that after resection of the entire coarctation there is a sufficient cuff projecting from each clamp to accomplish the anastomosis comfortably. Where necessary, the upper clamp can include the base of the left subclavian artery. If this is necessary, a partial occluding clamp of the Potts-Smith variety is preferable in order to allow flow through the subclavian artery, as complete occlusion might compromise the collateral flow sufficiently to cause cord damage, particularly if hypothermia is not used. Where a slight disparity might exist between the size of the smaller proximal lumen and the more dilated (poststenotic) distal lumen, a short vertical incision in the lateral wall of the aorta, including the base of the subclavian if necessary, can be done to enlarge this lumen. If the ends of the aorta cannot be anastomosed without tension, other means of re-establishing continuity must be utilized. The anastomosis can be performed in variable ways but the principles of using fine arterial silk, and everting the wall to allow good intima-to-intima approximation should be adherred to. In children interruption of part or all of the suture line should be done to allow for growth. An over and over continuous suture of 3-0 arterial silk can be used in adults. Reinforcing interrupted sutures are placed where necessary. Sutures should be placed carefully so that there will be little or no leak when the clamps are removed. Following the completion of the anastomosis, the distal clamp is removed and inspection made for leaks. The proximal clamp is then released slowly with careful monitoring of the blood pressure. Blood is infused intravenously at this time at such rates as necessary to support the systemic pressure.

2. Correction by patch graft.

Infrequently, a hypoplastic prestenotic segment of aorta is encountered which is a little too long for an end-to-end union to be accomplished. One method of treating these, when the aortic wall in the narrowed segment is apparently normal, is by making a vertical incision through the narrowed segment and inserting a Teflon patch graft. Under these circumstances this will yield an adequate lumen and may be a less complicated procedure than excision of the long narrowed segment and utilization of a tube graft to re-establish continuity. This technique was well described by King, Kaiser, and King.[7] Gross[5] has also utilized this procedure under these circumstances.

3. Resection and insertion of a prosthetic graft.

Infrequently, a long narrowed segment of hypoplastic aorta will be encountered which necessitates resection and substitution with a prosthetic graft. Long gaps can be bridged by an end-to-end anastomosis in young children and for them a graft should be used only as a last resort. For adults it is best to use a graft for those patients having an aneurysm involving the aortic wall and for those with advanced sclerotic changes of the aorta in the region of the stricture. A woven Teflon graft is used and the anastomoses performed with a combination of continuous and interrupted sutures of 3-0 and 4-0 silk. If the patient is young and a small caliber graft is inserted, there arises the problem of graft size as the child grows larger. This can be evaluated periodically by clinical examination and angiocardiograms when necessary. Schuster and Gross[8] reported long-term follow up studies of 50 patients with aortic homografts with very favorable results. It is our opinion that a graft should not be inserted if an anastomosis with a lumen of one centimeter or more in diameter can be accomplished.

4. Subclavian artery to descending aorta.

Blalock[1] originally designed in the laboratory the operation of anastomosing the transected subclavian artery to the descending aorta as a means of correcting the coarctation. There are instances when this procedure might be utilized to bridge the gap when it is necessary to resect a segment of such length that primary anastomosis cannot be accomplished. This may provide some advantage related to the growth potential of the vessel. The disadvantages are that the vessel may kink and that valuable collateral blood supply to the body below the coarctation may be destroyed. Of two patients thus treated at Duke University, one did well and the other was not relieved of hypertension.

Complications

Sealy and associates[9, 10] focused attention on the immediate and delayed hypertension that occurs following correction of coarctation and the mesenteric arteritis that is sometimes associated with it. Six of 30 patients who developed postoperative hypertension had signs and symptoms of arteritis believed due to vascular changes. Two patients required bowel resections for segmental areas of necrosis and two others required reduction of the hypertension by hydralazine hydrochloride and reserpine, which controlled abdominal pain. Trummer and Mannix[11] reported that eight of 33 patients undergoing resection of coarctation of the aorta developed significant postoperative pain, presumably due to the syndrome of acute necrotizing arteritis.

Of the group of patients studied at Duke University who had immediate hypertension following operation, the blood pressure returned to a normal range rather quickly. The 14 patients sustaining delayed elevations, had persistence of the hypertension for six to 14 days. Though the early postoperative type of hypertension may make the surgeon apprehensive about the possibility of the disruption of the suture line, there were no apparent ill effects from these episodes, nor do they predispose to the delayed hypertensive reaction. The diastolic hypertension that begins after the second day is of much more serious import, and may be the beginning of a chain of events that progresses from vascular spasm to vascular degeneration and tissue necrosis in the intestinal tract. Treatment with reserpine will abort the episode and prevent tissue damage when given early.

Paraplegia occurs in approximately one to two per cent of the patients. The cause is not certain usually but could be related to occlusion of the subclavian artery or interruption of the "key" intercostal.

Suture line disruption can occur and is usually due to infection at this site.

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METABOLIC FAULTS AND MENTAL RETARDATION

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Since Garrod's recognition in 1908 of alkaptonuria and his use of the term "inborn error of metabolism" to characterize this, as well as albinism, pentosuria, and cystinuria as familial diseases, the number of such disease states has continued to multiply to an amazing degree. There are now well over 50 entities of clinical importance in this group, of which the majority have been recognized in the past 15 years. The relationship of these disturbances to defects in single enzymes has led to diagnostic specificity in such curious and varied clinical states as those with clinical signs or symptoms of disturbed intestinal absorption, renal tubular dysfunction, hemolytic crises, muscle dysfunction, and recently an increasing number of neurologic disorders and mental retardation as a part of or separate from other physiologic or growth disturbances.

The elucidation of these disorders and their relationship to genetic abnormalities, and the fact that cellular morphologic changes can be linked to one gene–one enzyme defects has rapidly given us the means not only of studying and classifying chromosomal abnormalities, and to study individuals in families, and correlate these with enzymatic defects of varying degree, but in so doing the wider spectrum of such disorders has been unfolded. Such studies now permit prognostic diagnosis as it relates to future offspring of families with genetic defects and the chances for defective metabolism. As important has been the recognition also that programs may be instituted by dietary restriction and other means for utilization of other metabolic pathways that serve to counterbalance the pathway at fault. Such knowledge if properly applied may not only prevent serious complications in many of these derangements, but also prevent the progression of anatomic or physiologic dysfunction if recognized early enough.

Dr. A. W. Renuart of the Murdoch Center and Duke University Department of Pediatrics reported[1] on his experience of using six simple urine screening tests which will quickly detect abnormal quantities of metabolic products in the urine. He has shown these to be of value and pointed out that these may serve to detect some 23 metabolic disturbances which can result in mental retardation and neurologic disorders. Seven other readily available clinical laboratory tests he also points out are significant diagnostic aids in an additional group of similar disorders.

The "S. C. State Plan for Construction of Facilities for the Mentally Retarded" for 1966-67, published by the State Board of Health, tabulates the number of mentally retarded individuals in South Carolina as derived from known and estimated projections. The following table made up from this data gives an indication of the extensiveness of this as a health, economic and social problem.

MENTALLY RETARDED IN SOUTH CAROLINA:
TOTAL ALL AGES & SEVERITY: 74,669

Age - Years	Educable	Trainable	Severe
½-5	7,765	896	298
5-19	21,355	2,465	821
20-65	31,709	3,659	1,220
65 plus	3,884	448	149
Subtotals	64,713	7,468	2,488

The number of these conditions attributable to disorders of metabolism is not recorded, but represents a considerable segment of the total.

Knowing that we now have available prognostic, diagnostic, and treatment modalities which may be used not only for proper management but also often may provide significant amelioration and prevention makes it urgent that physicians in practice utilize these aids as fully as possible in their own offices, or through State or other laboratory facilities now readily available, so that the number now classified as profound or severe, if recognized and properly treated when based on metabolic faults, could hopefully be arrested and often improved. That such is possible even for middleaged adults with some of these disorders is amply substantiated[2] by Dr. T. L. Dormandy and R. J. Porter in their discussion of familial fructose and galactose intolerance. This has also been established for a variety of other metabolic disturbances in younger individuals which, until the etiology had been discovered, resulted by the natural course of the disorder in progressive disability.

REFERENCES

1. Renuart, A. W.: Screening for Inborn Errors of Metabolism Associated with Mental Deficiency or Neurologic Disease or Both. New Eng J Med. 274:384 (1966)
2. Dormandy, T. L.; Porter, R. J.: Familial Fructose and Galactose Intolerance. Lancet 1:1189 (June 3, 1961)

Breast cancer treated at the Johns Hopkins Hospital—1951-1956: Review of international ten-year survival rates—E. F. Lewison, A. C. W. Montague, and L. Kuller. Cancer 19:1359-1368 (Oct) 1966.

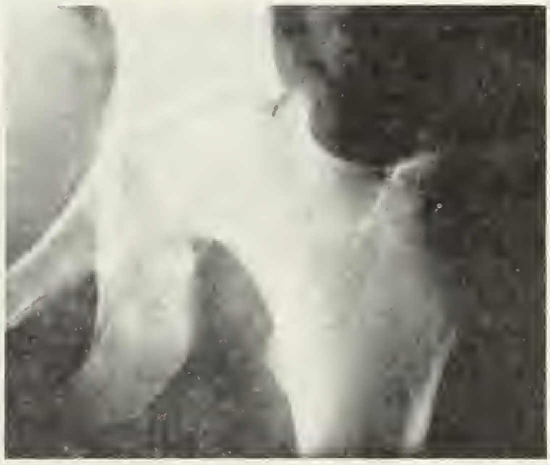
Recent results of surgical treatment of breast cancer at the Johns Hopkins Hospital reveal that the crude five-year survival for radical mastectomy was 62.3% and that the crude ten-year survival rate was 48.7%. These results were compared with three prior time periods. Progressive improvement was noted despite the paradox of a uniform and level trend in our national mortality rates. The prognosis for Negro women appeared to be comparatively poor. A collective study of international ten-year survival rates was reviewed to compare the effectiveness of varying methods of treatment. The striking characteristic of these world-wide survival rates is their remarkable similarity regardless of the difference in the type of treatment. This concordance is true despite the dissimilarity of country or clinic being compared. A controlled clinical trial to evaluate the relative merits of equivalent methods of treatment must be undertaken as soon as possible.

X-RAY FILM OF THE MONTH

WM. A. KLAUBER, M. D.
Self Memorial Hospital
Greenwood, S. C.

and

S. E. PUCKETTE, JR., M. D.
Medical College Hospital
Charleston, S. C.



This AP film of the left hip was taken on a young colored female complaining of a limp. The physical examination revealed a scissors gait and evidence of anemia. A simple laboratory test helped confirm the suspected x-ray diagnosis.

This patient has sickle cell disease with development of ischemic necrosis in the femoral capital epiphysis. Films of her right hip demonstrated similar finding. An excellent review of the radiological aspects of sickle cell disease is contained in Reynold's book on sickle cell disease[1] from which the following highlights are taken.

Bone infarction is a well known part of sickle cell disease and its variants. Oxygen depletion either due to local or systemic factors produces intravascular sickling, local circulatory stagnation and eventually ischemic necrosis. The appearance that results varies according to the site and extent of the infarction, the state of the reparative processes, the number of infarctions and the stress to which the infarcted bone is subjected.

While the infarctions may occur in the epiphyses of any of the long bones, lesions are rarely seen in the distal part of the forearms or the lower leg. They are occasionally encountered about the knee or elbow and are more frequent in the humeral head. The femoral capital epiphyses are particularly susceptable.

In the young, the epiphyseal ossification center is encased in a thick cartilage which is substained by the synovial fluid, thus the center during the early years is protected and characteristic changes are not to be expected before the age of 10. Necrosis of the femoral head occurs with roughly equal frequency in patients with pure sickle cell disease and in its variants, but as the variants tend to have a longer life span, the overall number of cases seen in variants is higher.

Stress due to weight bearing on the damaged femoral head may produce collapse and deformity and is usually limited to the cephalad aspect of the epiphyses. Following collapse, there is development of subchondral granulations which growing in the manner of pannus may cause further cartilage destruction, and eventually, the changes of degenerative arthritis become superimposed.

REFERENCE

1. Reynolds, J.: The Roentgenological Features of Sickle Cell Disease and Related Hemoglobin Hemoglobinophathies. Springfield, Thomas, 1965, pg. 148.

Antiseptic and aseptic prophylaxis for burns: Use of silver nitrate and of isolators—J. S. Cason et al. Brit Med J 2:1288-1294 (Nov 26) 1966.

In controlled trials local application to human burns of compresses and of cream containing 0.5% silver nitrate had highly significant prophylactic action against infection with *Pseudomonas aeruginosa* and *Proteus* species; there was a smaller effect against *Staphylococcus aureus* and none against miscellaneous gram-negative bacilli, including *Klebsiella* and *Enterobacter* species, some of which are considerably more resistant than *Pseudomonas aeruginosa* to silver nitrate. Mean temperatures and respiration rates were lower in the patients treated with silver nitrate compresses and cream than in patients of the control series treated with penicillin cream. Preliminary studies with a ventilated plastic isolator gave promising results including fewer airborne bacteria and absence of *Pseudomonas aeruginosa* from several extensive burns; however, conversion of an open ward to a ward of single and two bed rooms and the subsequent introduction of air conditioners with partial recirculation through filters did not lead to any drop in the infection rate with *Staphylococcus aureus* and *Pseudomonas aeruginosa.*

Spontaneous Pneumothorax: Treatment and Mortality—W. Y. Inouye, R. B. Berggren, and J. Johnson. Dis Chest 51:67-73 (Jan) 1967.

The records of 76 patients from the hospital of the University of Pennsylvania and 77 patients from the Philadelphia General Hospital with spontaneous pneumothorax have been analyzed for etiology, recurrence, mortality, and method of treatment. There were a total of 176 episodes. One hundred and eighteen patients (72.3% of the total group) had no demonstrable pulmonary disease of blebs, usually found at the apex of the lung. Twenty-three patients (14.1%) had pulmonary tuberculosis; 12 patients (7.4%) had underlying pneumonia. One half of the group averaged 11 months in age, and the remainder of the group averaged 61 years. The largest group of the patients were treated by closed tube thoracotomy (46% of the episodes), 28.4% of the pneumothoraces were treated conservatively, 13.1% by either pleurectomy or wedge resection, and 12.5% by thoracentesis. Patients with recurrent episodes of pneumothorax, bilateral pneumothorax, massive homopneumothorax, persistent air leak, or failure of lung to expand promptly with lesser procedures should be treated by open thoracotomy and pleurectomy.

President's Page

Medicine is the most magnificent profession the world has ever known (considering the ministry an avocation and not a profession).

One of the things that helped make it great was the feeling of fellowship physicians felt with Providence. This feeling of the presence and approval of the Almighty multiplied the assurance the physician felt and transmitted to the sick. When disability or death was inevitable the physician so armed eased the pain, frustration, and desolation of the ill and their relatives. This power went far in building medicine into The Most Magnificent Profession. Physicians so equipped "went about doing good" in a most inspiring way. They had a sense of partnership with God. Medicines and surgical techniques were in short supply. But such physicians used what they had reinforced by spiritual resources to marvelous advantage.

Then something happened. The medical profession was deluged with advances wonderful to behold. Miracles became almost commonplace. Our profession worked mightily trying to keep up with these new procedures and drugs. Many physicians began to lose their sense of dependence on Providence, the ultimate source of all knowledge and wisdom and power. In the process of transferring our primary allegiance from God to drugs and to surgery we increased our knowledge and lessened our wisdom.

The increase in knowledge and decrease in wisdom improved the life of the people but hurt the standing of our profession. We largely depended on drugs and surgery at the expense of our sense of dependence on God.

But among physicians as among the public in general an explosive regeneration of interest in religion has occurred. Our profession is rapidly recovering from its lapse. The AMA, the SCMA, most other state medical societies, and many county societies have a committee on Religion and Medicine. The SCMA has a very active one. It has done a marvelous job under the leadership of Dr. N. B. Baroody of Florence. The meetings it has sponsored have been attended by large crowds of ministers and physicians. The committee will help any group in the state put on such a meeting—medical societies, churches, etc. Questions usually considered are such as these: what and how should a dying or permanently disabled person and his family be told? who should do the telling? where do the minister and the lawyer fit in to best advantage (many of these patients have no will drawn)? etc.

Our Medical College is very active in this field of medicine and religion.

It is obvious now that our profession did not forget God. It just got overwhelmed by colossal changes. It is rapidly returning to its old status of fellowship with God.

Combining the two—an intimate relationship with God and wise use of medical advances—will enable our profession to help people far better than it ever could before. Either alone is wonderful. The two together will be fabulous.

Norman Eaddy, M. D.

Editorials

Doctors of Medicine and Practitioners of Chiropractic

Tom Brown at Oxford voiced a familiar thought about a certain doctor:

I do not love thee, Doctor Fell
The reason why I cannot tell
But this alone, I know full well,
I do not love thee, Doctor Fell.

Whether the objectionable doctor was doctor of divinity or medicine, the writer saith not. There were no chiropractors in Tom Brown's days, since Dr. Fell was obviously not disliked because of that calling. Nowadays, were Dr. Fell a chiropractor, doctors of medicine would dislike him for reasons which to them seem quite sufficient.

Modern medical knowledge has been built up by a linking of fact to fact, by confirmation of theory, by experiment and practice, by discarding outworn methods, and aiming for logical sequence. To medical men other approaches seem inadequate.

About 70 years ago a relatively uneducated grocer conceived a theory that he could cure nearly all disease by manipulation of the joints of the spine, by which measure he said he could relieve pressure on the nerves emerging from the spinal cord. His first "cure" was made on his janitor, who was relieved of deafness of many years standing by "adjustment" of the bones of the neck. The fact that the nerves concerned with hearing do not traverse the spine cast no damper on his enthusiasms. From deafness to practically any disease was a short step; particularly were those conditions in which medical treatment fell short from lack of scientific knowledge considered prime material for the chiropractic hand.

No plausible proof has yet been offered that adjustment of the spine has any effect except perhaps on very minor local disturbances. The spine is a tough structure, well braced and laced with ligaments. To displace a vertebra requires a sledgehammer blow or other major injury.

The chiropractor has made no sound effort to document his claims. His educational requirements are very low; training at times has been completed in 30 days. The 12 schools of chiropractic are recognized only by themselves; their faculties seldom have college diplomas.

The chiropractor lives on the gullible and the disillusioned. His treatments seldom do physical harm. The menace of the cult lies in its opposition to accepted medical methods; it decries vaccines, ignores diabetes, poliomyelitis, angina, meningitis, and many other conditions with which the physician can deal adequately. Even appendicitis is an acceptable item for treatment.

Chiropractors are licensed by a Chiropractic Board in most states "to palpate and adjust the articulations of the human spinal column by hand only". They may not give drugs or do surgery, and the instruments and appliances that they may use are limited. Even so, these instruments run to flashing lights, slight shocks and other gadgetry to impress the credulous.

Medicine believes that chiropractic is an ineffective, unscientific, and dangerous cult that preys on human gullibility by fruitless promises and "treatment". Someone has said that the human spine has three functions — to support the head, support the ribs, and support the chiropractor — all of which it seems to do adequately.

The Doctors Hospital Plan

The use of this term by the Physicians Mutual Insurance Company seems like a perversion of a title to delude a gullible public. Full page advertisements in some of our newspapers proclaim that a "Board of Doctors" has developed this desirable plan. Possibly there is a Board of Doctors, but who they are and how many and how responsible they are is not explained. This may be an excellent proposal and one said to be acceptable to the state of South Carolina, but it travels under an aura of general medical approval that it cannot justify.

The American Academy of Pediatrics Speaks Up

H.R. 14—Handicapped Child Benefit and Education Act.

This is legislation in which the Academy should take an active interest. Although its alleged purpose is to provide support for the "education and training of the handicapped" and for "exemplary education programs," it is quite clear that this bill, if passed, would further promote the development, under the auspices of *local education authorities,* of "comprehensive programs for the early detection and identifications of handicapping conditions."

In many ways, this legislation is similar to that which now makes possible the development and delivery of health services under Title I of the Elementary and Secondary Education Act of 1965.

In our opinion, its passage would further complicate an already confused situation.

We believe that H.R. 14 should not be passed into law, not because its objectives are unworthy, but only because it would place within the hands of *education authorities* still more responsibility for the planning and organization of medical services.

H.R. 913—A bill to amend the Public Health Service Act in order to promote the detection of phenylketonuria and other inborn errors of metabolism leading to mental retardation or physical defects.

In our view, this is a poor piece of legislation, one with noble aims, but based upon unwarranted medical assumptions. We do not believe that, at this time, we have sufficient knowledge concerning either the correct and early diagnosis of inborn errors of metabolism, nor their effective management, to warrant this kind of public health programming. The funds needed to support this legislation would be much better utilized to further research in this field.

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50 YEARS AGO

The Journal of the South Carolina Medical Association

July 1917

The Journal listed the physicians who had been called to military service .

Dr. M. R. Mobley reported on examination of school children in Florence.

Standardization of hospitals was under discussion. Dr. J. R. Young served on a reference committee.

Report of the President for 1966-67

George Dean Johnson, M. D.

The year has been busy and fruitful for me. I have enjoyed traveling to county and regional medical meetings over the state. We have had our legislative problems. We have seen the medical profession slip toward federalization of medicine. We have had our problems with the AMA disability program. Let us consider some of the more important events that have occurred this year.

Medical education for practicing physicians continues to improve and become more and more available. Medical educational TV, under Dale Groom, is recognized nationally and is popular in this state. Regional Assemblies and medical meetings all over the state and in North Carolina and Georgia draw attention of practitioners with their interesting programs. The quality of the programs sponsored by drug firms constantly improves. Our Medical College has established a Health Science Foundation to receive gifts of money, stock, bonds, or land that generous doctors or anyone may care to give. We have needed such a facility for a long time and it will be a great advantage to our school.

The osteopaths, four in number, made a determined effort to pass a law allowing them all rights to practice as M. D.'s. Through the efforts of Jack Meadors, your Council, and especially doctors all over the state the bills were overwhelmingly defeated. The speaker of the house even tried a rare subterfuge and actually all three bills were passed. This came as a surprise even to the sponsor of the bills, Hon. James Cuttino, who was on his way to the front of the House to speak in their behalf. Through efforts of several of our friends in the House all three were reconsidered and all three were tabled. This result shows what can be done when we, as physicians, stick together and are on good terms with our respective delegation. It is ironic that only four of the large Charleston County delegation, home of our medical school, voted to oppose the bills. It seems illogical also that because the Medical College is a state school no one on the Board would testify and the administrator was advised not to do so. If the Medical College can't testify and the Charleston County Society cannot make anymore favorable impression on its delegation, it seems that some fence mending is highly in order in Charleston as well as in other counties in our state. Florence, the home of our Medical Association, had one for, and three against us.

I cannot think of a more appropriate point to plug Scalpel. We must learn to play politics. We must reward openly our friends, thank them for helping us, and raise money—indeed give money—to support our friends and help defeat those against us. We doctors, whether we like it or not, must come out of the hospital and out of our offices and get into politics. We must let our Congressmen and Senators know how we feel about direct billing under Title 19 and all other changes we would like to make in health laws. The place to start is in our precincts and counties.

We fared very well in the House with auto inspection but the Senate butchered it beyond recognition. Actually, this bill is only a small start toward what we need in our state to reduce the number of highway deaths but a step in the right direction.

We were not fortunate in persuading the Governor to place the operation of Title 19 under the Board of Health. He favors the Department of Public Welfare and he has good grounds to do so. Only two of the 30 states have the supervision under the Board of Health. California established an entirely separate Board. The current plans are to start this program July 1 of this year for all of those on Welfare rolls at the present time. Due to insufficient state funds, 600,000 medically indigent will not be covered this year. The income level for medically indigency has not been established yet but most likely will be in the neighborhood of $2,400.00 for a family and $1,500.00 for a single person. Like Medicare, Title 19 or Medicaid as it is called, will pay the physician "usual and customary" fees. The law, as written, does not allow the intermediary to pay the patient and have him pay the physician. In other words, there is no allowance at the present time for direct billing of the patient. According to Dr. Rivers, the program will get under way July 1 of this year and will include, most likely, only those people already on the Welfare program.

I shall not take your time to describe the Regional Program for Heart Disease, Cancer, and Stroke except to say that South Carolina has received a grant for planning and planning has already started.

Comprehensive medical care is being promoted regardless of income under the Office of Economic Opportunity. Our Health Officer, Dr. Aycock, is well aware of this program and is keeping up to date on it.

A called meeting of the House of Delegates was held in Columbia to discuss the Blue Cross - Blue Shield enabling act. I think everyone, including the Chief Insurance Commissioner, feels that changes must be made. After two lengthy meetings, the House of Delegates, sitting as corporators of the S. C. Medical Care Plan, gave its approval. A good number of physicians in the State feel strongly that the Blue Shield Plan should not act as intermediary for Medicare. These doctors feel, and properly so, that the S. C. Medical Care Plan thus becomes an arm of the government. Over half of the applications for payment to physicians have been on assignment, so apparently most physicians in South Carolina do not hesitate to take advantage of more rapid and more dangerous method of payment. My feelings on the subject are well known. Blue Shield is far from perfect but we certainly exercise more control over that arm of the government than we do over any other. I wish we had similar control over other arms all the way to Washington. I have much more faith in Hal Jameson and the other directors of Blue Shield than I do in any private company. My feelings are shared by many. Today and tomorrow this important point will be voted on and in our democratic way whichever side has the most support will win. We physicians all want the same thing—the best possible care of our patients in the best possible atmosphere. We differ on what we think is the best method to develop the best atmosphere under the circumstances.

There is no end to government direction of the practice of medicine. We physicians tried to head off the start and we failed. Surely, we should make every effort to alert ourselves and to guide and direct as much as possible the direction practice should take. I have appointed a sub-committee of the Legislative Committee to study all the federal programs affecting medicine and to keep us posted. This will in no way make federal control more palatable but it will help us guide our destiny as nearly as possible. Federalized medicine is here; it's here to stay; we must mold, guide, and control it as far up the road toward Washington as we can. To try to ignore it is folly.

Mr. Chas. O. Finley, through his letters to holders of the AMA Disability Policies, has created more interest and resulted in more letters to your delegates than anything else in the years I've been a delegate. As you know, this controversy will be resolved in June in Atlantic City. Twenty-six casualty companies and the insurance committee of the AMA say the premiums are inadequate to provide the benefits guaranteed through August of this year. Mr. Finley and the Firemans Fund Insurance Company say the premiums are adequate and they are willing to guarantee the program for five years. The AMA Insurance Committee can see no reason in continuing even for five years a program that is unsound—so it goes. The House of Delegates of the AMA will come up with the best possible program for physicians.

At the banquet tomorrow night, the S. C. Medical Association will cite a newspaper and a television station for publicizing medical items and reflecting credit in general on the medical profession. We are delighted to do this and hope in the future years this policy may be continued.

Last year your House of Delegates decided to make its committees more permanent by staggering the appointment of their membership. I think this has created more willingness and a greater interest. For the first time your association has furnished secretaries to keep records of their meetings. I feel sure that both of these steps will work to the advantage of the Association. At this point I want to thank the committees for the good work they have done.

Later you will hear from our treasurer, but I must warn you that the activities and the expenses of the Association are increasing. Is there a doctor in the audience whose expenses haven't gone up in the past five years? The same is true of your state as well as the American Medical Association. I'm sure you must have seen, as I did, the plan to remove the great "National Geographic" as well as the JAMA from a tax exempt status. This is the chief reason for an increase in the AMA dues. The treasury department warned the AMA at least seven years ago that too much of the income from the JAMA and specialty journals was being used to operate the AMA. I hope the AMA as well as the National Geographic Society will be able to defeat this proposal.

Jack Meadors and his staff have done their work efficiently and pleasantly. No state to my knowledge accomplishes so much with so few members of staff. As we grow in number and make more demands on our central office we must be prepared to give Jack more money. He and his staff have my deepest gratitude and sincere thanks.

Your Council has responded with pleasure and interest when we had to go to Columbia to testify. We though we might have to call out the entire membership for support in the Senate but it never became necessary. Bill Perry and the other members have carried on the duties of the Association well, and, I believe, according to what you would want them to do. I believe your trust and confidence in them is fully justified and well placed.

To all members of the Association over the state my sincere thanks are extended. I want to thank publicly my two associates Sam Elmore and Fred Adams for allowing me to be away from our practice so much. They have been patient and long suffering. I am grateful for their understanding.

This year has been a great one for me because of your friendship, your courtesies, and your many kindnesses. I trust that your faith has not been misplaced and that the affairs of the Association are in good order. With you I look forward with pleasure to this meeting and other meetings in the years to come. Our Association has come a long way and we have just started. Thank you sincerely for an unforgettable and most inspiring year.

Texas Congressman Addresses Scalpel Banquet

Honorable Omar Burleson, democratic congressman from Texas, was the speaker at the fourth annual SCALPEL banquet at the Ocean Forest Hotel at Myrtle Beach on Monday night, May 8th. Dr. Charles H. Browne, chairman, presided, and the speaker was introduced by Dr. George Dean Johnson, president of the state association.

In his speech the congressman urged the approximately 350 physicians, wives and guests to get involved in political affairs and take a hand in electing representatives to local, state and national legislative bodies. He said "the one great hope for peace and freedom in the world today rests on the strength of the American capitalist economy." Physicians should be community leaders in striving to preserve our system, which produces more goods in any year than all of the rest of the world combined.

Mr. Burleson was especially high in his praise for our South Carolina members of congress. He also expressed his thanks to the physicians who have worked to help keep him in congress for the past 21 years.

In addition to the president of the state medical association, SCALPEL was honored to have in attendance also the now-president, Dr. Norman O. Eaddy, Dr. Milford O. Rouse, president-elect of the American Medical Association, Mrs. Asher Yaguda, president of the Woman's Auxiliary to the American Medical Association, Mrs. C. T. Wilkinson, president of the Woman's Auxiliary to the Southern Medical Association, Mrs. Rita Banov and Mrs. Betty Strohecker, president and president-elect of the Woman's Auxiliary to the South Carolina Medical Association; also members of council, the house of delegates and many other officers of the Association and county societies from throughout the state.

The board of directors of SCALPEL appreciate the large attendance, and urges all members of the association and auxiliary to become active members.

STATE BOARD OF HEALTH

Dr. Wallace Resigns — Dr. King Elected

Dr. W. R. Wallace

Dr. William Wyman King

Dr. W. R. Wallace, chairman of the Executive Committee of the State Board of Health since 1944, is retiring as chairman but will continue to serve as a member of the Committee.

Dr. William Wyman King of Batesburg has been elected chairman by the Executive Committee. He has been a member of the Committee since 1956.

Governor Robert E. McNair has paid tribute to Dr. Wallace, saying he is "the kind of person who makes our State what it is by his unselfish service to it." In all the years since 1922 when he was elected to the Executive Committee, he has missed only one of its monthly and special meetings, and that was caused by a conflict of dates with the Tri-State Medical Association meeting in Richmond when he served as its president.

Dr. Wallace, who has been practicing medicine in Chester since 1909, was honored by his home town with "W. R. Wallace Day" on the occasion of the 50th anniversary of his medical practice in Chester.

Born in Chester County, he received the A. B. degree from Presbyterian College in 1903 and the M. D. degree from the Medical College of Virginia in 1908. He interned at Memorial Hospital in Richmond and Roper Hospital in Charleston and did postgraduate work at New York Polyclinic in 1913 and the Mayo Clinic in 1926. He was one of the founders of the Chester Sanatorium, was president of the South Carolina Medical Association in 1944 and president of the Tri-State Medical Association in 1952. He is listed in *Who's Important in Medicine.*

He has been president of his Rotary Club, an elder of his church for the last 39 years, and a member of the Board of Trustees of Presbyterian College.

A native of Lake City, Dr. King is in the active practice of medicine in Batesburg. He received his premedical education at the College of Charleston and received the M. D. degree from the Medical College of South Carolina in 1927 and the D. P. H. degree from Johns Hopkins University in 1932. He is past president of the S. C. Academy of General Practice, past vice-president of the S. C. Medical Association, past president of the Ridge Medical Society, and past president of the Alumni Association of the Medical College of South Carolina. He has been a member of the S. C. Nurses Licensing and Registration Board and the Pollution Control Board. He is president of the James B. Bonham Academy of Batesburg-Leesville, past president of the Batesburg-Leesville Lions Club, and a member of his church's official board. He is listed in *Who's Who in the South and Southwest.*

Harrison L. Peeples, M. D.
Vice President

Dr. Harrison L. Peeples has been engaged in the practice of medicine and surgery in Estill, S. C. since. 1945.

He was graduated from The Citadel in 1938 and received his M. D. degree from the School of Medicine, University of Louisville in 1942. He interned at Greenville General Hospital and served as a captain in the U. S. Army Medical Corps from 1943-44. He did post graduate work at New York Polyclinic in 1950.

Dr. Peeples is a member of Southern Medical Association, a member of the American Academy of General Practice and has served the S. C. Chapter of AAGP as director, chairman of commission on Legislation and Public Policy and chairman of Insurance Committee. He is now vice president.

A former state chairman of SCALPEL, Dr. Peeples is on the medical and surgical staff of Hampton General Hospital and is local surgeon for Seaboard Air Line and Southern Railways. He is a member of the Board of Trustees at the Medical College of S. C., at present serving as vice-chairman.

A trustee for the Hampton County Board of Education from 1954-1966, Dr. Peeples is a member of the Lions Club, the American Legion, a medical advisor to the County Chapter of Cancer and Mental Health Associations; Chief, Medical Care Division, Hampton County Emergency Health Service and a founder of the Baptist College in Charleston.

Dr. Peeples is owner and directing manager of farm and timber lands devoted to general farming, forestry products production and cattle.

He is a member of the Lawtonville Baptist Church in Estill, where he serves as a deacon. He is married to the former Elizabeth Cleland of Hampton and has three daughters.

ABSTRACT OF MINUTES OF COUNCIL

May 7, 1967

Business brought before the Council on May 7 included a request for $100.00 from the Student American Medical Association for expenses. This request was granted and the money appropriated.

It was decided by Council that the brochure which is given to new members of the Association should also be sent to senior medical students along with a leaflet concerning the type of insurance which is available through the Association.

Dr. Howard Stokes, treasurer, gave the financial report for the year.

January 1, 1966 - December 31, 1966

REVENUE

JOURNAL		
Advertising		$31,620.32
Subscriptions		4,819.50
Total Revenue from Journal		$36,439.82
GENERAL		
State Dues		$47,860.00
Directories		147.31
Miscellaneous		602.37
Benevolence Fund		580.13
Total General Revenue		$49,189.81
TOTAL JOURNAL & GENERAL REVENUE		$85,629.63

EXPENSES

JOURNAL		
Printing		$27,820.17
Editor's Expense		1,352.91
Salaries:		
Editor	$2,400.00	
Advertising Manager	1,200.00	3,600.00
Total Journal Expense		$32,773.08
EXECUTIVE OFFICE		
Rent		$ 2,025.00
Office Supplies		1,289.97
Exec. Sec'y Travel & Expense		2,586.86
Salaries		24,428.06
Total Executive Office Expense		$30,329.89

SECRETARY	
Clerical Help	$ 900.00
Total Secretary Expense	$ 900.00
COMMITTEE ON PUB. RELATIONS, J. I. Waring, Chm.	
Salary	$ 1,200.00
Chairman's Expense	544.88
Total Expense, Committee on P. R.	$ 1,744.88
GENERAL EXPENSE	
Delegates' Travel & Expense	$ 2.123.75
Other AMA Meetings Travel Expense	446.99
President's Expense	1,625.00
Treasurer's Expense	100.00
Telephone & Telegraph	1,581.72
Postage	859.00
Insurance	1,397.85
Newsletter	556.15
Accounting & Audit	730.00
Taxes	1,159.45
Dues & Subscriptions	460.00
Medico-Legal	550.00
State Meetings	863.18
Woman's Auxiliary Appropriation	721.50
Woman's Auxiliary Bulletin	1,687.06
Retirement & Pension Plan	4,198.77
Public Health Information Com.	224.73
Miscellaneous Com. Expense	297.75
Committee on Careers in Medicine	2.500.00
Benevolence Fund	1,400.00
Miscellaneous	1,109.07
Interest	658.33
Hospitality Room	266.86
Delegate to Student AMA	350.00
President's Gift	160.00
Total General Expense	$26,027.16
TOTAL EXPENSE	$91.775.01
ITEMS HANDLED WHICH ARE NOT REVENUE	
AMA-ERF	$ 5,875.00
AMA Dues	63,507.50
County Dues	763.20
SCALPEL Dues	4,080.00
INCOME FROM INVESTMENTS	
Peoples Federal Savings & Loan Ass'n.	$ 567.35
Dividends Reinvested (Investors Mutual Fund)	3,884.22
	$ 4.451.57
Permanent Home Fund (See below)	2.544.56
Total Income from Investments	$ 6.996.13

INVESTMENTS

GENERAL FUND	
Peoples Federal Savings & Loan Ass'n.	$13,395.04
Investors Mutual Fund—6,618.916 shares @ $10.779 per share.	71,351.91
(Value as of April 28, 1967: 6.746.831 shares @ $11.69 – $78,870.45)	
Total General Fund	$84.746.95
PERMANENT HOME FUND	
Aiken First Federal Savings & Loan Assn.	$10.850.65
Security Federal Sav. & Loan Assn., Aiken	10,850.66
Anderson Savings & Loan Assn.	10,855.06
First Federal Savings & Loan Assn., Anderson	10.855.11
Home Bldg. & Loan Assn., Orangeburg	10,819.58
Pickens Bldg. & Loan Assn.	3,979.28
Total Permanent Home Fund	$58,210.34

(This total includes interest earned in 1966 of $2,544.56)

(All of the above currently pay interest at 4½%)

Dr. Stokes indicated that the Association has a deficit for about $15.000 at the end of each year which must be financed temporarily and proposed we liquidate sufficient funds from our investments to supply the necessary funds. It was decided that the sum be taken from the sale of Investor's Mutual Funds.

The chairman of Council was asked to appoint a committee of three to look into investments of the Association.

Mr. Meadors reported a net increase of 54 members in the Association. 80 new members joined, 8 resigned and 34 were lost by death or otherwise. He reported that the funds contributed to the AMA-ERF amounted to $5,885.00 and that so far 200 members had paid dues to SCALPEL through the Association.

An increase in salary was voted for Mr. Meadors and it was suggested that he should have an assistant or understudy in the near future. Mr. Meadors is to consider the need for this assistance.

Dr. Eaddy made a motion that the executive secretary be asked to look into the possibility of a bill in the legislature which might prohibit advertising by individuals such as chiropractors.

In response to a request from the South Carolina Hospital Association for assistance in establishing rules for releasing information on hospital patients, Council decided to establish a committee of 3, to be appointed by the chairman.

Following the decision earlier in the year, it was noted that special citations for helpful assistance will be given to The News and Courier, and a Spartanburg television company.

Dr. Johnson expressed the feeling that there should be a subcommittee of the Legislative Committee to review all federal legislation, to interpret its application to medicine in South Carolina.

Later in the day Mrs. Robert Hagerty appeared before Council to tell about the work started by the Woman's Auxiliary in the field of nurse recruiting. Council voted to appropriate the sum of $200.00 for assistance in this work. Mrs. Leon Banov, president of the auxiliary, and Mrs. Betty Strohecker, president-elect, appeared before Council and reported on their activities.

After a presentation by Dr. Frank Owens on the subject of Title XIX, it was voted that Council recommend to the Association that it adopt a resolution indicating the desire of the profession that the medical aspects of Title XIX be under the Public Health Department rather than the Public Welfare Department. Dr. William DeLoache, president of the South Carolina chapter of the Academy of Pediatrics, spoke supporting this resolution.

Dr. Donald Kilgore brought up the necessity for obtaining legislation which would define the administration of blood as a service rather than a commodity. This was to be presented to the House of Delegates.

It was voted to give the sum of $300.00 to the Auxiliary to assist with its work.

A number of other matters were discussed in anticipation of action in the House of Delegates.

May 8

Council approved an appropriation of $175.00 for the high school Essay Contest, as has been done in previous years. Council also approved the proposal that the expenses of one of the alternate delegates to the AMA be paid at each Annual Meeting.

May 9

Council met and considered nominations for various offices which will be vacated this year.

May 10

Council agreed on the dates for the next Annual Meeting to be May 12-May 15, 1968, at Myrtle Beach.

A decision was made to hold a special meeting of Council for the appointment of committees on June 14. A proposal that the Association become a member of the State Chamber of Commerce was referred to Mr. Meadors for the investigation of feasibility.

Dr. William Perry was re-elected chairman, Dr. Martin Teague was re-elected as vice chairman and Dr. Harvey Atwill was elected clerk of Council.

QUIDNUNC

National Kick The Doctor Week

The sources of many people's individual complaints about doctors have been expressed elsewhere. Feelings of anxiety and hostility, because of the need to depend upon physicians with whom they have little personal relationship, seem to be at the bottom of the difficulty in many cases. This past year these individual discontents have been given expression in a veritable avalanche of abuse and blame heaped upon the medical profession in magazines, newspapers, and on radio and television. Fault with anything even slightly related to the practice of medicine is laid at the doctor's door. In fact, the time may not be far off when the public will demand a *NATIONAL KICK THE DOCTOR WEEK* — maybe between Ground Hog Day and Valentine's Day.

Such widespread hostility towards the doctor must express a deep psychological need. In fact, in these trying times, it may well be a normal reaction essential to the emotional stability of the nation. Organized medicine should get over any sensitivity on the subject and be in the forefront in demanding a *NATIONAL KICK THE DOCTOR WEEK*. We must support anything which will contribute to the health of our citizenry. Too long have doctors and their organizations been against every forward trend. Too long have the councils of reaction held sway.

This is an urgent matter. It may be that millions still believe that the physician in Sir Luke Fildes' painting is worried over the child, rather than whether his bill is going to be paid. Other millions may actually think that physicians want to prolong life and relieve suffering when they research new techniques and drugs. These and other outdated notions make it imperative that the profession get behind (no pun intended) the *NATIONAL KICK THE DOCTOR WEEK* movement. The future of the country may depend on it. The stability of our grandchildren may hang in the balance. Let us joyfully assume this painful posture.

Westchester Medical Bulletin

Democracy in Business

Earlier this year, following disclosures in the San Francisco Examiner that the OEO had put up several hundreds of thousands of dollars to promote the establishment of co-operative stores in the San Francisco Bay area, the National Federation of Independent Business, Inc., publicized this situation nationally which engendered many protests.

C. Wilson Harder, Federation president, pointed out that in the Brooklyn area alone there are 22 full time agents on the OEO payroll knocking on the doors selling the idea of co-op stores. Throughout the nation at present from some 1,000 community action centers, 20,000 such agents on OEO payrolls are working to overthrow private business in favor of setting up co-ops.

———

Notice of a meeting: "11:00 A.M. — Neuro-spychiatric Out-Patient Clinic—Research Bldg." Honest confession is good for the soul.

———

Just as the bedroom radio was clicked off, there were the words "Quick Relief," loud and clear.

From what? I wondered. There were so many choices: nagging backache, headache, irregularity, arthritis, asthma, tooth decay, loose dentures, acid indigestion, bad breath, offensive odor or worry over unpaid bills.

———

They tell me it took nine doctors to get President Johnson through his ordeal — one for the polyp, two for the hernia and six to fill out the Medicare forms.

Charleston Evening Post

———

From the Hospital Record—

The Radiologist's Diagnosis:

"Minimal cardiomegaly. The most common cause of course is enema. Otherwise, negative chest."

MEDICAL COLLEGE OF SOUTH CAROLINA

GRADUATION — 1967

Governor Robert E. McNair addressed 141 graduating health professionals at the 140th Commencement Exercises of the Medical College of South Carolina on June 1 at The Citadel Armory before an audience of 1,700 people.

Eighty candidates were presented the Doctor of Medicine degree. Eleven graduates received B. S. degrees in Pharmacy; and four Doctor of Philosophy and three Master of Science degrees were awarded. Forty-three graduate nurses received their diplomas.

Gov. McNair urged the graduating doctors to remain in the state. "The people of our state need twice as many doctors as we now have. The shortage of nurses and other paramedical personnel is critical. And, according to all indications, the demand for more and better medical care is outrunning our supply," he stated.

"Those of you who have passed through this institution are well aware of our commitment to meeting these needs," Gov. McNair continued. "While we have recognized the necessity for moving ahead with other plans and projects, we have found it feasible to give our Medical College priority number one.

"During the past three years alone, the General Assembly has poured more than $14 million into this school to keep it operating on a desirable basis. The general Appropriations Bill for next year, passed by the Senate includes the largest amount of all—about 8-million, 897 thousand dollars . . . . In the meantime, our new Higher Education Coordinating Commission is moving ahead with a comprehensive study of South Carolina medical education needs. With all deliberate speed the Commission will be seeking answers to the questions of when, where, and how much we ought to expand medical education—including a possible second medical college. Because of the astronomical cost of medical education and increasing costs of all higher education, we believe that this is the most practical approach to the problem."

After the presentation of diplomas, the deans of the schools announced the honor graduates and recipients of awards.

Dr. Henry Miles Faris, Jr. was named first honor graduate of the School of Medicine. Dr. Walter Pierce Pinson, III, received second place honors.

The following graduates of the School of Medicine have received honorable mention for high scholastic achievement: Drs. Angus Sellers Baker, Jr., William Burke Crymes, Herbert Michael Goldberg, Harriman Harding Jet, Charles Cabell Jones, Hamilton Earle Russell, Jr., Claude Wilson Smith, Jr., and James Leland Young, Jr.

Dr. Faris received the General Practice Award, awarded by the South Carolina Chapter of the American Academy of General Practice to the student voted by his classmates to exhibit the characteristics and abilities which hold promise for a significant contribution to his medical career. Junior medical student William C. Wilson also received the General Practice Award.

Drs. Smith, Baker, and Young were awarded the Mosby Scholarship Awards for scholarship. These awards are given annually by the C. V. Mosby Publishers.

Drs. Faris and Pinson received the Lange Medical Publications Award for scholarship. These awards are given annually by the Lange Medical Publications Company.

First honor graduate in the School of Pharmacy was Edward Wallace Hill. Second honor graduate was Paul Davis Tutherow.

Edward W. Hill received the Dean's Award for scholarship. This award is given annually by Johnson and Johnson Company for the highest grades in Pharmacy Administration.

Two Merck Sharp and Dome Awards are given annually for scholarship. Hugh S. Thompson received this award for the highest grades in Pharmacognosy, and Edward W. Hill was recognized for the highest grades in pharmaceutical chemistry.

Three awards are given annually by vote of the faculty of the School of Pharmacy. Hugh S. Thompson received two of these awards, the Lilly Achievement Award for leadership qualities, professional attitude and academic performance; and the Rexall Trophy for the most outstanding student in the graduating class. Edward W. Hill received the Bristol Award for meritorious service to the class.

Graduating pharmacy students named to the Dean's List were Edward W. Hill, George D. Schwerin, Hugh S. Thompson, and Paul D. Tutherow.

Mrs. Sherry Lee Mikkelsen Sherfesee was named first honor graduate of the School of Nursing. Mrs. Vashti Marie Jordan Munoz was named second honor graduate, and Miss Janet Elizabeth Youmans received third place honors.

Mrs. Sherfesee was awarded the School of Nursing Alumnae Association Award.

Patricia Ann Williams was awarded the Women's Auxiliary of the South Carolina Medical Association Award.

Members of the School of Medicine Alumni Association elected the following new officers for the coming year: Dr. Charles R. May, Jr., President; Dr. Thomas T. Galt, President elect; Dr. Walton L. Ector, Vice President; and Dr. R. W. Hanckel remains Secretary-Treasurer.

The spring meeting of the S. C. Society of Anesthesiologists was held at Myrtle Beach on May 8. Dr. John D. Thomas assumed the presidency of the society for 1967-68. Dr. John E. Mahaffey was elected delegate to the national society meeting to be held in September. Dr. Thomas was elected alternate delegate.

Dr. Louis P. Jervey, Associate Professor of Medicine, was appointed June 1 as Associate Dean of the School of Medicine. Dr. Franklin C. Fetter, Dean and Vice President for Academic Affairs, said he was delighted Dr. Jervey had agreed to fill the new position which he had planned for some time.

Dr. Jervey will continue his interest in student affairs and will assume more of the other administrative duties of the dean's office.

MEDICAL ETV

JULY 20

ACCIDENTAL POISONING (Clinical considerations of a major cause of pediatric mortality.)

Dr. Robert J. Haggerty, Harvard Medical School
Mr. Henry L. Verhulst, Chief, Poison Control Division, USPH, Washington, D. C.
Dr. Margaret Jenkins, Medical College of South Carolina
Dr. Henry W. Moore, Columbia, South Carolina

AUGUST 3

COURTROOM MEDICINE (Some forensic experts discuss and show how to give medical testimony in court—and how not to.)

Dr. William Fairey, Physician and Attorney, Manning, South Carolina
Mr. Francis Marion, Attorney, Greenville, South Carolina
Mr. Henry H. Edens, Attorney, Columbia, South Carolina
Dr. Rhett Talbert, Medical College of South Carolina

AUGUST 17

TREATMENT OF CONGESTIVE HEART FAILURE. A classic lecture by the eminent teacher and author,

Dr. George Bruch, Tulane University Medical School

SEPTEMBER 1

HEADACHE

Dr. Cheves Smythe, Dr. Rhett Talbert, Dr. William Vallotton and Dr. Ramsey Mellette, Medical College of South Carolina

(This program, now of chiefly historic interest to us, is the second TV production of the Medical College of South Carolina. Doubtless the participants have changed more than the subject.)

DOCTORS IN THE NEWS

Dr. W. Atmar Smith, retired physician and author, was the recipient of a distinguished service award presented by the Greater Charleston board of Realtors at a banquet in May. He was recognized as a "citizen willing to go the last mile to help his community." **Dr. Richard Hudson Rush** of Conway, **Dr. Thomas W. Messervy** of Summerville, **Dr. Count Pulaski, Jr.** of Hampton and **Dr. Charles C. Wannamaker** of North Charleston have been elected to active membership in the American Academy of General Practice. **Dr. Sam G. Lowe, Jr.** of Rock Hill has been elected to Fellowship in the American Academy of Pediatrics. **Dr. Henry B. Gregorie, Jr.** of Charleston has been elected to the board of trustees of the University of the South, Sewanee, Tenn. **Dr. William H. Prioleau, Jr.** has been awarded the Army Commendation Medal at Fort Benning, Ga. Dr. Prioleau, an Army captain, received it for meritorious service in support of U. S. objectives while stationed in Vietnam. **Dr. Willard B. Mills** of Greenville was chairman of the immunization committee of the sponsoring groups for the Greenville County Stop Measles Campaign in May. **Dr. N. B. Baroody** of Florence was installed as president of the South Carolina Heart Association at the association's annual meeting in May. **Dr. Peter C. Gazes** of Charleston was chosen president-elect; **Dr. David G. Askins, Jr.** of Marion, secretary; **Dr. Donald E. Saunders** of Columbia, vice-president; Board members include **Dr. Ambrose G. Hampton, Jr.** of Columbia, **Dr. Don Richardson** of Seneca, **Dr. William Duke** of Lancaster, **Dr. Benjamin Blackmon** of Orangeburg. **Dr. John C. Muller** of Greenville will remain on the board as past-president. Physicians on the program were Doctors **Peter C. Gazes** and **Charles Summerall** of Charleston; **Frank Geiger, C. Warren Irvin,** and **Donald Saunders** of Columbia; **John C. Muller, Arthur G. Meakin,** and **J. D. Ashmore** of Greenville; **N. B. Baroody** of Florence; **H. Parker Jones** of Beaufort; **J. P. Coan** of Spartanburg, and **Glen Askins** of Marion.

Now in the press and shortly to be
published by the
South Carolina Medical Association
Volume 2
of
A History of Medicine
in South Carolina
By Joseph I. Waring, M. D.
covering the period 1825 to 1900.

This book is a continuation of the first volume, published in 1964, whose story ended at 1825. The preceding volume was well received by medical historians.

The second volume will soon be available.

For a limited period members of the South Carolina Medical Association are entitled to purchase this book at $3.25 postpaid. Orders may be placed now.

It's price on the market will be $7.75 postpaid.

Advance Order Form

South Carolina Medical Association
Historical Committee
80 Barre Street
Charleston, S. C. 29401
Gentlemen:

Please send me .... copies of the book "A History of Medicine in South Carolina, 1825-1900", by Joseph I. Waring, M. D. at $3.25 per copy.

Payment enclosed.

....
Name

....
Address

....
City and State, Zip

Please make check payable to:
S. C. Medical Association,
Historical Committee

THE PERIPHERAL VASCULAR REHABILITATION FACILITY

GILBERT B. BRADHAM, M. D.*

Of man's systems of confrontation with the environment, none serves such an immediate number of purposes as does the vascular system. Despite the long recognition of this fact and despite the myriad attempts to delineate physically the bounds of the vasculature and its functions, it remains that we are yet incapable of measurements which are lucidly descriptive of this system. Consider that at present we are unable to quantitate the flow of blood unless by surgical means we encircle an artery with an electronic probe. Consider also that the results of surgical procedures are as yet unknown except as judged by gross clinical descriptions which vary tremendously between physicians.

For these reasons, the Medical College Hospital and Vocational Rehabilitation have jointly invested in the construction of a Facility designed to study intensively the vasculature and its dysfunction. The purpose of this article is to express the organization and capabilities of this new Facility.

Development

In recent years the Medical College has been confronted with a large number of patients exhibiting peripheral vascular diseases. At the same time, the Vocational Rehabilitation Program expanded to include directly under its auspices a large number of these patients. The requirements of Vocational Rehabilitation to document disease processes and to evaluate patients on the basis of these documentations, and the Medical College's function as a teaching hospital, developed the present Facility.

Two rooms on the West section of the fourth floor of the Medical College Hospital were allocated for this project. One of the rooms was designed as a constant temperature-constant humidity room. This room was reconstructed so as to close windows and to provide double doors with dead air spaces between them. Secondary walls were constructed to provide dead air insulation, and the ceilings were insulated. A ducted air system was provided to generate "walls" of air and a tertiary perforated wall was used to obviate draughts. A four ton air conditioner and dehumidifying unit was connected via the floor and housed in a space between hospital floors. By these means temperature in the room is kept at 73° F., humidity at 55% and convection currents are insignificant.

The adjoining room is constructed to provide office and administration space, and room for a specialized blood laboratory.

The costs of the Facility, its equipment and initial salaries was $66,000, 70% of which was extended by Vocational Rehabilitation and 30% by the State of South Carolina.

Organization

The Director is responsible for the development, organization, administration and evaluation of the Facility and its functions. The Director derives no salary from the Facility but rather coordinates the activities of the Facility so as to provide its service to those who wish its use.

The Medical Technician is a salaried graduate nurse who performs the techniques of vascular evaluation.

The secretary schedules appointments, provides proper charting and filing of accumulated data, and maintains liaison with Vocational Rehabilitation and the Medical College Hospital. Additionally, she also provides a current file of educational material.

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*Assistant Professor of Surgery, Medical College Hospital, Charleston, S. C.

The work classification Technician is a surgical resident who during his training wishes 3-6 months of confined vascular study. This opportunity will be open to residents throughout the State. An adequate salary is provided.

Equipment and Measurements

Current basic equipment consists of an oscillometer, plethysmograph, direct skin and muscle temperature equipment, infrared and linear quartz thermometers, a thermograph, and angiographic equipment. Suitable recorders are available, including the polaroid attachment to the thermograph.

Oscillometrographs are conventional records of pulse volume. These measurements are made by a cuff similar to that of a sphygmomanometer and the pulse volume is suitably recorded. This measurement is helpful in documenting pulse waves and their relative magnitudes. The value of such a measurement is essentially a gross estimation of the effect of the heart's contraction upon the elastic structure of the vessel wall. The degree of atherosclerosis or the presence of an obstruction might be correlated with this measurement.

The plethysmograph is also a means of documenting pulse volume. Primarily this measurement is made on the digits to estimate patency and elasticity of small blood vessels. The measurement can be simultaneously made on contralateral extremities.

Direct skin and muscle temperatures are conventional measurements to ascertain the effective dispersion of body heat. That this measurement is necessarily correlated with blood flow is questionable and constitutes an area of basic clinical study.

Angiography will not be a special technique of the Facility. This is a routine hospital function and is generally quite satisfactory. The Facility will contain special equipment such as Seldinger catheters for the purposes of visualizing remote portions of the vasculature.

Temperature measurements will constitute one of the major interests of the Facility. The infrared thermometer is a device analogous to a "sniper scope" which by sensitive measurement of infrared irradiation can discern temperatures at a distance. The instrument is not only very sensitive but also is highly mobile, permitting rapid measurement of temperatures without touching the patient. By such means, the sympathetic innervation can be indirectly monitored in a rapid and convenient manner. The linear quartz thermometer is capable of measuring temperatures to 0.0001° C. The use of ultrafine instruments from other disciplines such as industry has advanced the accuracy of medical measurements and helped to refine diagnostic techniques. The linear quartz thermometer will initially be used to assess the temperatures of open ulcers. It is hoped that by this technique, information can be gained about the relationship of blood supply in the healing process of these ulcers.

The thermograph is the more advanced of the Facility's techniques. The thermograph is a device which scans the area under study and developes a polaroid film of the surface temperatures. Sixty thousand individual temperature measurements are obtained and recorded in a "heat photograph." This technique has been extremely useful in sensing the presence of vessels beneath the skin, of localizing internal organs such as the placenta and delineating areas of thrombophlebitis and inflammation. Carotid insufficiency, the effects of sympathectomy and occasionally the presence of inflammatory carcinoma (breast) have been discerned by this technique. For all purposes, one of the primary values of the thermograph is a recorded image which can be used in reevaluating the patient's condition.

Future functions of the Facility will be in the area of isotope quantitation of blood flow, and the study of individual tendencies to thrombosis. In the first case, it is hoped that a constant rate of injection of a blood compatible isotope with dilution analysis and digital rate meter monitoring will allow an accurate quantitation of blood flow to the area of interest. It is hoped that contemplated study of blood clotting will allow a more thorough analysis of the tendency toward thrombosis which is so often present in advanced atherosclerosis.

Function

It will be the function of the Facility to study and document characteristics of peripheral vascular disease. "Peripheral" will be taken to refer to disease exclusive of the heart and thoracic vessels, that area being of such specialty as to demand the attention of the thoracic surgeon.

The Vascular Facility can be used by any physician for any patient. An appointment schedule will be kept and requests can be made of any or all described tests or measurements. Service patients will be given appointments by the resident staff, generally from the clinic on an outpatient basis or from the wards. Private patients will be given appointments by their own physician or his consultant. Vocational Rehabilitation patients may be referred by counselor or physician.

Any patient properly requiring Vocational Rehabilitation financial assistance will be screened in the present manner. Patients able to pay for the services rendered by the Facility will pay an amount calculated on a strict cost accounting basis. Surgical consultations to the Facility will be conducted according to the present custom throughout the Medical College Hospital.

Summary

The Peripheral Vascular Rehabilitation Facility of the Medical College Hospital has been developed and designed to study and document characteristics of vascular disease. The Facility is now equipped to provide information obtained from the oscillogram, plethysmograph, skin and muscle temperatures, infrared and linear quartz temperatures, thermography, and angiography. The future is planned to include isotope blood studies and blood coagulation defects.

The Facility has been organized so as to provide to the State a means whereby any patient can take advantage of current techniques of vascular evaluation.

A controlled trial of antiserum in the treatment of tetanus—R. K. Goyal, C. N. Neogy, and G. P. Mathur. Lancet 2:1371-1373 (Dec 24) 1966.

A blind controlled trial with antiserum was undertaken in 470 patients with proved tetanus. Patients were randomly allotted into various treatment groups: group 1, no antitetanic serum (ATS); group 2, 10,000 units of ATS; group 3, 30,000 units; and group 4, 60,000 units. The survival rate was 54.4%, 59.0% 50.4%, and 52.3% in groups 1, 2, 3, and 4, respectively, an insignificant difference. There was no difference in the course of the disease during the first week of hospital stay in the four groups. The development of complications, such as laryngeal spasms and pyrexia, was comparable in the various groups. The length of survival in fatal cases and the length of hospital stay in the cured patients was not significantly different in the various groups. These results indicate that antiserum has little value in the treatment of clinical tetanus when it is fully developed.

THE SOUTH CAROLINA REGIONAL MEDICAL PROGRAM FOR HEART DISEASE, CANCER AND STROKE

CHARLES P. SUMMERALL, III, M. D.
Medical College of South Carolina
Acting Regional Program Coordinator

"Thou marshall'st me the way that I was going"
—Macbeth, Act 2—

How Did The South Carolina Regional Medical Program Start?

On March 10, 1966, an infant program was admitted to South Carolina for initial evaluation, with a variety of poorly defined complaints that ranged from rampant idealism to a suspected syndrome of federal big-brotherism. The panel of 15 examining physicians included Dr. Julian Price of Florence, then president of the SCMA and a leading expert both on big-brothers and on infant disorders; Dr. O. B. Mayer of Columbia, past president of the SCMA; Dr. J. P. Coan of Spartanburg, then president of the South Carolina Heart Association; and Dr. Frank Geiger, Chief of Heart Disease, Cancer and Tuberculosis for the State Board of Health. After hours of detailed discussion, the panel agreed unanimously that the infant should be encouraged to grow up in South Carolina.

An especially complicated problem arose in the assessment of the infant's immediate ancestry. Its father, the President's Commission on Heart Disease, Cancer and Stroke, had a somewhat mottled reputation and had, according to reliable reports, been tarred and feathered in an important South Carolina community. Its mother, the 89th Congress, had endured a protracted confinement, but had been attended successfully by the House Committee on Interstate Commerce, with forceful and effective consultation from the AMA and the AHA. An uncle of the infant, the 2nd National Conference on Cardiovascular Disease, was, however, highly regarded by all who knew him.

Thus was born the South Carolina Regional Medical Program. Its principal sponsors — the Medical College of South Carolina, the State Board of Health and the South Carolina Heart Association—gave their firm support to the stated purpose of Public Law 89-239: "Through grants, to encourage and assist . . . *regional cooperative arrangements* among Medical Schools . . . and hospitals for *research* . . . *education* and *related demonstration of patient care* . . . without interfering with patterns or methods of financing of patient care or professional practice."

The goal of cooperative arrangements to facilitate patient care is far from original. In fact, the leading objectives of the regional program are accurately defined in the 10-point program of the South Carolina Medical Association: "—to promote closer cooperation among agencies providing medical care in South Carolina

"—to study the need and availability of medical care and promote plans for its improvement."

Less clearly involved are other goals, probably desirable, which remain in the background of the regional program—the use of communications and computer methods in medicine, the application of marketing and systems concepts to delivery of medical care, a concentrated effort of the medical community to shape our future before the future shapes us.

What Is It?

In its early stages, the wide scope and flexibility of the Regional Program incited an equally wide variety of theories and speculations. More than once, the program recalled the ancient legend of an elephant and several blind men, who, after palpating different sections of the beast's anatomy, reported his resemblance to a wall, to a snake, to a tree trunk and so forth. It is said that some blind men, hearing the elephant trumpet from far away, concluded that it was a dragon and predicated grave events.

The legislative definition of the Regional Program, as embodied in Public Law 89-239, is admirably compact. Three phases are described: first, organization of a Regional Advisory Group broadly representative of the health professions; secondly, a phase of region-wide planning, supported by grants; thirdly, an operational phase of grant support for projects designed to carry out the regional plan. There are no provisions for new construction or for patient care other than for demonstration purposes. The legislation authorized only a 3-year exploratory period, healthily bolstered by a $225 million appropriation. The remarkable nationwide progress of the program is, however, expected to justify its renewal for at least five more years.

Congress had wisely provided only a scaffold upon which to construct the regional program. The artisans of the program have been outstanding professional leaders, marshalled by Dr. Robert Marston, former dean of the University of Mississippi School of Medicine. Responsibility for the program was assigned to the National Institute of Health, where it would be sheltered from political pressure or intervention. Dr. Marston, in February, 1966, became Associate Director of the National Institute of Health and promptly developed specific guidelines for planning and for operational grants. The activities eligible for operational support include continuing education and training, research, communication systems, diagnostic and treatment equipment, support of staff in cooperating institutions and transportation of patients.

The response of medical leaders across the nation has been rapid and enthusiastic. Currently, planning activities involve almost every state. In New York and other large states, several separate programs have been organized. In North Carolina, an outstanding program is under way with the vigorous joint sponsorship of the state's three medical schools—Duke, the University of North Carolina, and Bowman Gray. Texas has predictably corralled the largest planning grant award of over a million dollars. To date, four operational grant awards have been made.

What Is The Status Of The South Carolina Program?

In South Carolina, as in most regions, the medical school was selected by the Regional Advisory Group as program applicant. An initial planning grant was awarded on January 1, 1967, for one year, in the amount of $65,650, to support preliminary activities. On April 1, Mr. William Warlick was appointed project director. A definitive planning proposal has been developed and submitted to Washington for supplemental grant support. The plan has two major phases: (1) the collection of data that will broadly characterize the present status and needs in South Carolina for treatment of patients with heart disease, cancer and stroke; and (2) an examination of specific problem areas by study groups, whose topics include the role of community hospitals, the allied health sciences, methods of evaluation of program activities, and continuing education for physicians.

Where Might The Program Lead?

Teamwork among the health professions is now, more than ever, necessary and urgent. Cooperative arrangements cannot, however, consist only of a rearrangement of conventional roles and methods. To succeed, they must provide a suitable framework for progress in health care during decades to come. The "team concept" is an unavoidable, practical key to future patterns of delivery of health care. It is at the core of the Regional Medical Program. Our task is to find a proper operational definition of this concept, an involvement of individuals, medical schools, hospitals, public and voluntary agencies in a cooperative, but flexible and non-restrictive, alliance.

At the beginning, we must study our needs in detail and define imaginatively our plans to meet them. An important part of this challenge is to bring contemporary principles of management, of communications and of education into our planning and operational activities. At the beginning, too, we must acknowledge clearly the obstacles to such an undertaking. Cooperative arrangements will inevitably encounter zones of overlapping interest, of strong traditions and rivalry. The forces of conservatism in medicine are fundamental and a new program will meet the reluctance of a responsible profession to modify its proven methods. It is only through imaginative planning and cooperation, however, that we can hope to solve the problems that are now with us and to meet successfully the problems of the future. The Medical College is in the quarterback slot. It will be a wet game, with few spectacular passes or long gains. We need strong blockers in the line and big runners in the backfield. We need specifically the interest and support of every physician in South Carolina.

New Pharmaceutical Specialties

by Paul De Haen

For detailed information regarding indications, dosage, contraindications and adverse reactions, refer to the manufacturer's package insert or brochure.

Single Chemicals—Drugs not previously known, including new salts.

Duplicate Single Products—Drugs marketed by more than one manufacturer.

Combination Products—Consisting of two or more active ingredients.

New Dosage Forms—Of a previously introduced product.

NEW SINGLE CHEMICALS

EDECRIN

Diuretic—Other. Rx

Manufacturer: Merck Sharp & Dohme

Nonproprietary Name: Ethacrynic Acid

Indications: Congestive heart failure, acute pulmonary edema, renal edema, hepatic cirrhosis with ascites, edema due to other causes.

Contraindications: In patients with anuria, azotemia and/or oliguria. If severe, watery diarrhea occurs, Edecrin should be discontinued. Not to be administered to infants.

Dosage: 50-200 mg daily, in divided doses, after meals.

Supplied: Tablets—25 and 50 mg; bottles of 100.

LIBRITABS

Ataraxic. Rx

Manufacturer: Roche Laboratories

Nonproprietary Name: Chlordiazepoxide

Indications: Mild and moderate anxiety and tension, alone or associated with organic disorders or psychoneurotic reactions; preoperative apprehension.

Contraindications: Known hypersensitivity to the drug.

Dosage:

Adults—5 to 25 mg, 2-4 times daily.

Children over 6 years, 5 to 10 mg, 2-4 times daily.

Supplied: Tablets—5, 10 and 25 mg; bottles of 100.

LYOVAC SODIUM EDECRIN

Diuretic—Other. Rx

Manufacturer: Merck Sharp & Dohme

Nonproprietary Name: Sodium Ethacrynate

Indications: Congestive heart failure, acute pulmonary edema, renal edema, hepatic cirrhosis with ascites, edema due to other causes. For use when oral intake is impractical, or in urgent conditions.

Contraindications: In patients with anuria, azotemia and/or oliguria. Not for pediatric use. Should not be administered with whole blood or its derivatives, i.m. or subcutaneously.

Dosage: 0.5 to 1 mg/kg. body weight.

Supplied: Vials—equivalent to 50 mg ethacrynic acid, to be reconstituted.

MACRODEX

Hospital Solution. Rx

Manufacturer: Pharmacia Laboratories

Nonproprietary Name: Dextran 70

Indications: Plasma volume expander.

Dosage: 500 to 1000 ml, i.v.

Supplied: Bottles of 500 ml

RHEOMACRODEX

Hospital Solution. Rx

Manufacturer: Pharmacia Laboratories

Nonproprietary Name: Dextran 40

Indications: As a priming fluid, alone or as an additive, in pump oxygenators during extracorporeal circulation.

Contraindications: Marked thrombocytopenia, hypofibrinogenemia, and renal disease with severe oliguria or anuria.

Dosage: 10 to 20 ml/kg. body weight, to be added to the perfusion circuit.

Supplied: Bottles of 500 ml

(Rheomacrodex

(Rheomacrodex 10% in Normal Saline
(Rheomacrodex 10% in 5% Dextrose in Water

DUPLICATE SINGLE PRODUCTS

ETHAMIDE

Diuretic—Other. Rx

Manufacturer: Allergan Pharmaceuticals

Nonproprietary Name: Ethoxzolamide

Indications: Chronic simple glaucoma, preoperative acute and chronic congestive glaucoma, acute secondary glaucoma, and preoperative control of intraocular pressure.

Contraindications: In patients with idiopathic renal hyperchloremic acidosis, renal failure, a known depletion of sodium and/or potassium serum levels, and Addison's disease.

Dosage: One tablet 2 to 4 times daily.

Supplied: Tablets—125 mg; bottles of 100.

COMBINATION PRODUCTS

NATABEC — F.A.

Vitamin/Mineral Comb. — Prenatal. o-t-c

Manufacturer: Parke, Davis & Co.

Composition:
- Calcium carbonate
- Ferrous sulfate
- Folic acid 0.1 mg
- Nicotinamide
- Vitamins A, B_1, B_2, B_6, B_{12}, C, and D.

Indications: Dietary supplement during pregnancy and lactation.

Dosage: Not stated.

Supplied: Bottles of 100 and 1000 Kapseals.

ORTHO-NOVUM SQ

Progesterone/Estrogen Comb. Rx

Manufacturer: Ortho Pharmaceutical Corp.

Composition:

14 tablets	mestranol	0.08 mg
6 tablets	mestranol	0.08 mg
	norethindrone	2.0 mg

Indications: Oral contraception.

Contraindications: Patients with known or suspected malignancy of breast or reproductive system, liver dysfunction or disease, thrombophlebitis or pulmonary embolism, history of cerebral vascular accident, undiagnosed vaginal bleeding, pregnancy, lactation.

Dosage: One white tablet every evening, starting on the fifth day of the menstrual cycle, for 14 days. Then one blue tablet every evening, for 6 days.

Supplied: 20 and 60 tablet Dialpak.

MEETINGS

The 7th Charlotte Postgraduate Seminar will be held September 27-28 in Charlotte, N. C. at the Presbyterian Hospital.

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The 27th Annual Meeting of the American Medical Writers Association will be held at the Palmer House in Chicago, September 21-24.

The program is designed for both physicians and journalists with interest in the field of medical writing. Attendance is open to both members and non-members of AMWA.

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The South Carolina Pediatric Society will have its annual meeting September 8-9 at The Adventure Inn, Hilton Head Island.

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The 9th National Conference on the Medical Aspects of Sports, sponsored by the American Medical Association under the auspices of its Committee on the Medical Aspects of Sports, will be held in Houston at the Hotel American on November 26.

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Scientific Day will be held August 9 at Self Memorial Hospital, Greenwood.

New Pharmaceutical Wrinkles

Wyeth Laboratories has published a booklet called "The Sinister Garden", a guide to poisonous plants, with descriptions and illustrations. It is to go to practicing physicians and pharmacists, but is not available on request by mail.

Wyeth also has developed a safer packaging for aspirin—each tablet in a separate packet—to make access more difficult for investigative children and thereby to reduce the liability to poisoning.

The same firm has produced an antivenin against the poison of the coral snake. It will be supplied through state health departments.

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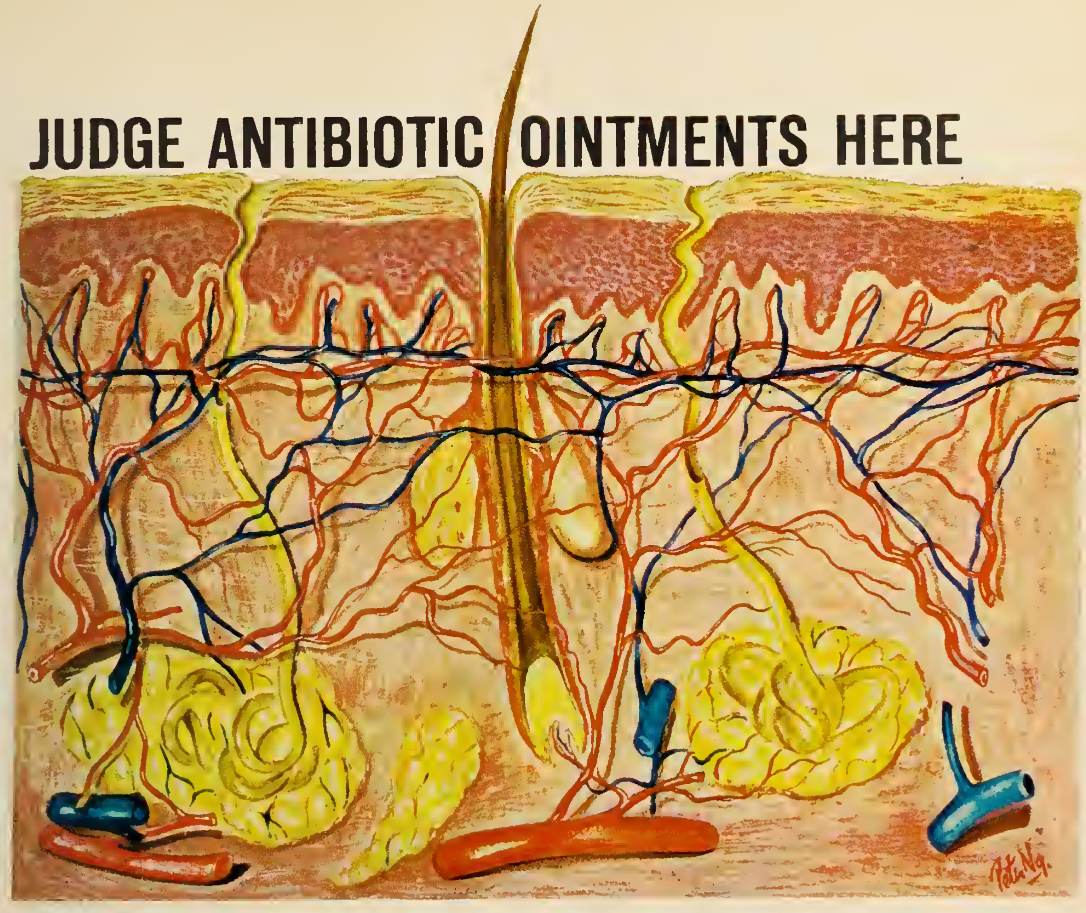
"Facts on Quacks," a complete source book touching every aspect of health quackery, is off the press. The new publication is considered a major instrument in the AMA's program of educating the public to the evils of quackery. It is especially designed for medical society use in their anti-quackery programming.

JUDGE ANTIBIOTIC OINTMENTS HERE



Results on skin are final proof of any topical antibiotic's effectiveness

No in vitro test can duplicate a clinical situation on living skin. 'Neosporin' (polymyxin B – bacitracin – neomycin) Ointment has consistently proven its effectiveness in thousands of cases of bacterial skin infection. The spectra of the three antibiotics overlap in such a way as to provide bactericidal action against most pathogenic bacteria likely to be found topically. Diffusion of the antibiotics from the special petrolatum base is rapid since they are insoluble in the petrolatum, but readily soluble in tissue fluids. The Ointment is bland and nonirritating.

Caution: As with other antibiotic preparations, prolonged use may result in overgrowth of nonsusceptible organisms and/or fungi. Appropriate measures should be taken if this occurs. Articles in the current medical literature indicate an increase in the prevalence of persons allergic to neomycin. The possibility of such a reaction should be borne in mind.

Contraindications: This product is contraindicated in those individuals who have shown hypersensitivity to any of its components.

Supplied: Tubes of 1 oz., ½ oz. with applicator tip, and ⅛ oz. with ophthalmic tip.

Complete literature available on request from Professional Services Dept. PML.

'NEOSPORIN'®
brand

POLYMYXIN B-BACITRACIN-NEOMYCIN OINTMENT

BURROUGHS WELLCOME & CO. (U.S.A.) INC., Tuckahoe, N.Y.

Why these 7 patients with moderate to severe anxiety may respond better to Mellari

1. The agitated patient.

Anxiety—particularly that beyond th range of minor tranquilizers—fre quently is expressed as gross moto restlessness, fidgetiness and purpose less movements, and may erupt int aggressive behavior. Mellaril is a most a specific for those patient whose anxiety follows such a patter

2. The psychosomatic patient.

The family physician is rarely given the diagnostic luxury of a classic, textbook "anxiety state." Most often he must probe for anxiety masked by a functional disorder—or which exacerbates a somatic problem. Double-blind evaluations have demonstrated that Mellaril can be a significant adjunct in the treatment of such patients.

3. The patient under situational stress.

Mellaril helps the patient deal with stresses of everyday life. Nonhabituating, it can be given for extended periods of time. It does not "separate" the patient from practical problems and pressures, does not induce euphoria or a fuzziness which can compromise the ability to cope with realities. Rather, it helps the patient move more competently in his daily world by eliminating useless tension, by allowing him to conserve emotional resources and energies, and to direct them against the problems really worth worrying about.

4. The menopausal patient.

The woman who sees change of life as the end of useful life requires support from both family and family physician. Whether the psychological impact of menopause is directly related to hormonal changes, or merely coincidental, is debatable, but estrogenic therapy is frequently inadequate. Mellaril is a useful aid for these patients and, alone, or in combination with reduced estrogen dosage, will help ease the menopausal misery.

5. The previously hospitalized psychiatric patient.

Such a patient may still require the type of medication he has been accustomed to, but because he is no longer in a controlled setting the acceptable level of adverse reactions must be lower. In such circumstances Mellaril is perhaps the drug of choice.

6. The agitated geriatric.

Tranquilizer therapy in the elderly patient always involves special (or at least accentuated) problems: the possibility of drug-induced ataxia, hypotension or depression, for example, assumes an additional significance. These reactions have rarely been observed in geriatric patients treated with Mellaril.

7. The constantly returning patient.

The anxiety patient who has not responded to a minor tranquilizer is not very likely to benefit from your minor tranquilizer of second choice. A major tranquilizer, such as Mellaril, may be indicated in such patients.

Contraindications: Severely depressed or comatose states from any cause, and in association with or following MAO inhibitors; severe hypertensive or hypotensive heart disease.
Precautions: Hypersensitivity reactions (e.g., leukopenia, agranulocytosis) and convulsive seizures are infrequent. Pigmentary retinopathy has been observed where doses in excess of those recommended were used for long periods of time. May potentiate central nervous system depressants, atropine, and phosphorus insecticides. Where complete mental alertness is required, administer the drug cautiously and increase dosage gradually. In addition, orthostatic hypotension (especially in female patients) has been observed. Epinephrine should be avoided in treatment of drug-induced hypotension.
Side Effects: Pseudoparkinsonism and other extrapyramidal disorders are infrequent; drowsiness, especially in high doses early in treatment, may occur; nocturnal confusion, dryness of the mouth, nasal stuffiness, headache, peripheral edema, lactation, galactorrhea, and inhibition of ejaculation are noted on occasion; photosensitivity and other allergic skin reactions may occur but are extremely rare.
Before prescribing, see package insert for full product information.

in moderate to severe anxiety, 25 mg. t.i.d.

Mellaril®
(thioridazine)

SANDOZ

Bartholin's gland
Periurethral glands
Cervical glands
Flagyl®.....
brand of
metronidazole
Seminal vesicles
Bladder
Prostate gland

Destroys Trichomonads Wherever They Are

Flagyl seeks out the sites where trichomonads hide. Only a systemic agent can. Flagyl does, selectively and effectively.

Flagyl destroys trichomonads in the inner crypts, glands and cavities of the genitourinary tract in both women and men. Consequently, Flagyl is capable not only of curing trichomoniasis in women but also of preventing reinfection.

Correctly used, with due attention to repeat courses of treatment for resistant, deep-seated invasion and to the presumption of reinfection from male consorts, Flagyl has repeatedly produced up to 100 per cent cure in large series of patients.

When the diagnosis of trichomoniasis is positive, Flagyl is positive.

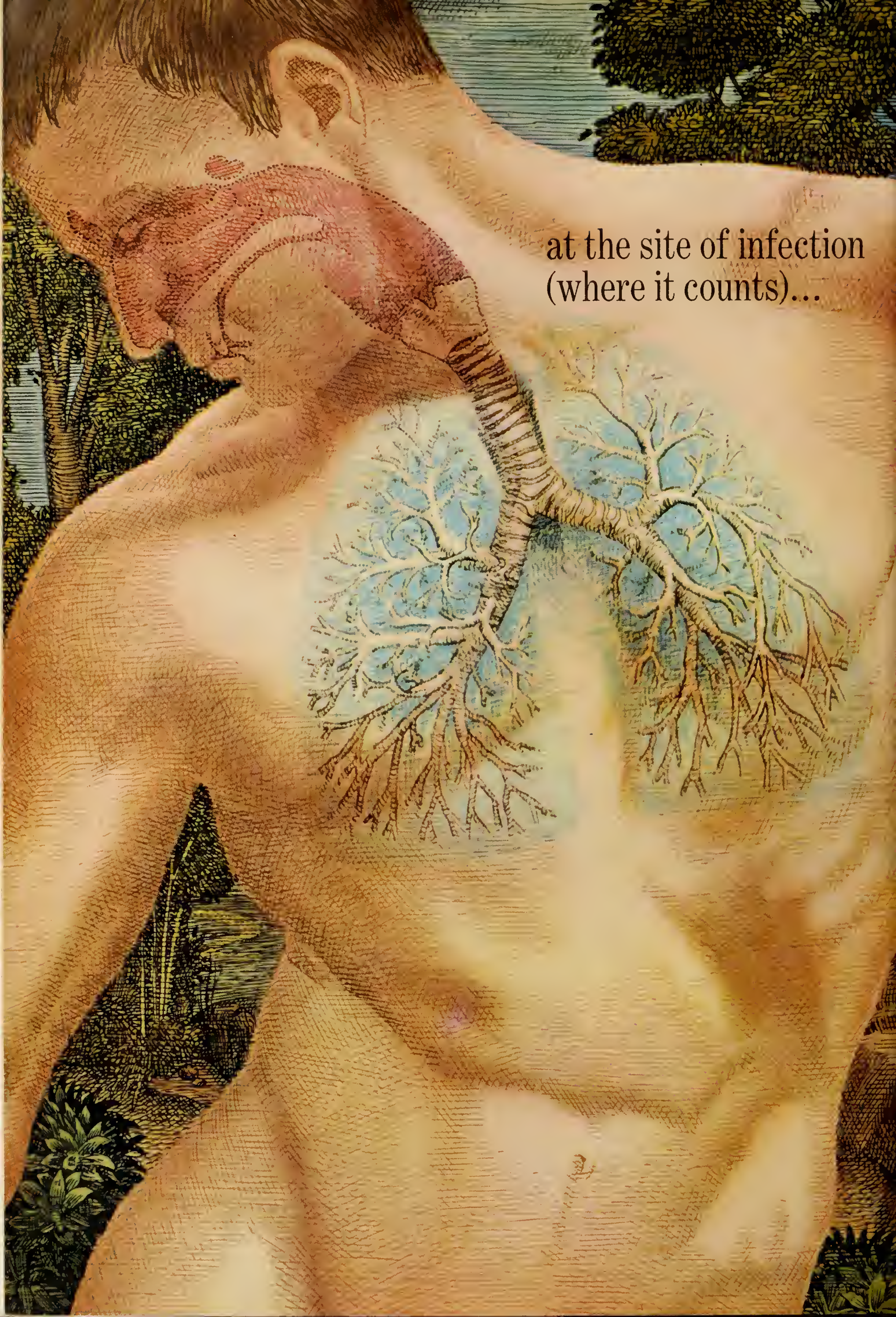
Dosage and Administration – In *women:* one 250-mg. oral tablet three times daily for ten days. A vaginal insert of 500 mg. is available for local therapy when desired. When used, one vaginal insert should be placed high in the vaginal vault each day for ten days; concurrently two oral tablets should be taken daily.
In *men* in whom trichomonads have been demonstrated: one 250-mg. oral tablet twice daily for ten days.

Contraindications – Pregnancy; disease of the central nervous system; evidence or history of blood dyscrasia.

Precaution–Complete blood cell counts should be made before, during and after therapy, especially if a second course is necessary.

Side Effects–Infrequent and minor side effects include nausea, metallic taste, furry tongue and headache. Other effects, all reported in an incidence of less than 1 per cent, are diarrhea, dizziness, vaginal dryness and burning, dry mouth, rash, urticaria, gastritis, drowsiness, insomnia, pruritus, sore tongue, darkened urine, anorexia, vomiting, epigastric distress, dysuria, depression, vertigo, incoordination, ataxia, abdominal cramping, constipation, stomatitis, numbness of an extremity, joint pains, confusion, irritability, weakness, flushing, cystitis, pelvic pressure, dyspareunia, fever, polyuria, incontinence, decreased libido, nasal congestion, proctitis and pyuria. Elimination of trichomonads may aggravate candidiasis.

SEARLE *Research in the Service of Medicine*


at the site of infection
(where it counts)...

Ilosone® provides more antibacterial activity than any other oral erythromycin

Acid stable, better absorbed... Ilosone produces faster, higher, more prolonged blood levels, even in the presence of food[1-3]

Because it is the most active form of oral erythromycin, Ilosone can help assure consistently greater antibacterial activity at the site of infection. Ilosone produces peak antibacterial blood levels two to four times those of other erythromycin preparations.[1,2] Not only are these levels attained earlier, but they are maintained for much longer periods. Even the presence of food does not seem to affect the activity of Ilosone.[1,3]

In the treatment of patients with bacterial infections susceptible to erythromycin, Ilosone has compiled an excellent therapeutic record. Since it exerts its greatest activity against gram-positive organisms, it is particularly useful in common respiratory and soft-tissue bacterial infections. Ilosone kills—not merely inhibits—streptococci, pneumococci, and more strains of staphylococci than any other macrolide antibiotic. This bactericidal action, coupled with the high antibacterial levels attained, makes Ilosone especially valuable in patients with low host resistance, such as infants, debilitated individuals, and diabetics.

Ilosone has shown no cross-resistance with penicillin and may be effective against organisms that have become resistant to that agent. Despite its high antibacterial activity, Ilosone has demonstrated a low incidence of side reactions. Blood dyscrasias, ototoxicity, and tooth staining have not been observed. Infrequent cases of drug idiosyncrasy, manifested by a cholestatic jaundice, have occurred, but there have been no known definite residual effects.

Now available:
New! Ready-mixed Ilosone Liquid 125! (Contains erythromycin estolate equivalent to 125 mg. erythromycin base per 5-cc. teaspoonful.)

700970

Ilosone®
Erythromycin Estolate

Lilly

(See next page for prescribing information.)

Ilosone®/the most active oral form of erythromycin

Description: Ilosone is the most active form of oral erythromycin that has been developed. Because it is stable in acid, well absorbed, and excreted in lesser amounts in the bile, it provides faster, higher, and longer-lasting levels of antibacterial activity (ABA) in the serum, even when taken with food, than do comparable doses of erythromycin.

Indications: Ilosone is indicated in infections caused by microorganisms sensitive to its action (especially staphylococci, hemolytic streptococci, and pneumococci). The drug is therefore useful in a high proportion of bacterial diseases encountered in clinical practice and particularly in the treatment of bacterial infections of the upper and lower respiratory tract and soft tissues.

In the treatment of acute bacterial pharyngitis and tonsillitis, this antibiotic has promptly eradicated the bacteria (streptococci) and has produced a parallel prompt clinical improvement. There have been no group A beta-hemolytic streptococci resistant to this preparation. In beta-hemolytic streptococcus infections, treatment should be maintained for ten days to prevent the development of rheumatic fever or glomerulonephritis.

Erythromycin estolate has proved to be very effective in pneumococcus pneumonia and in acute bronchitis with pneumococci on culture. Bronchopneumonia and otitis media in children have responded well to its use.

The antibiotic has been used very successfully in staphylococcus infections. Good therapeutic results have been obtained in soft-tissue infections, abscesses, cellulitis, carbuncles, wound infections, and furunculosis.

In serious staphylococcus infections, erythromycin preparations should be used only in combination therapy with other antimicrobial agents. As is the case with any treatment regimen used in these severe conditions, surgical procedures should be performed when indicated, and large dosages of the antimicrobial agents should be employed. In this fashion, Ilosone has been effective in staphylococcus pneumonia, osteomyelitis, septicemia, empyema, and meningitis.

Multiple 500-mg. doses of the drug have also been useful in gonorrhea and syphilis. Since penicillin is the drug of choice for the treatment of syphilis and gonorrhea, erythromycin estolate should be employed for these infections only in patients with a history of penicillin allergy. Also, other infections due to susceptible bacteria in patients known to be hypersensitive to penicillin or other antibiotics may be considered for treatment with Ilosone.

Contraindications: Ilosone is contraindicated in patients with a known history of sensitivity to this drug and in those with preexisting liver disease or dysfunction.

Adverse Reactions: Data obtained from seven years' use of propionyl erythromycin ester and erythromycin estolate (Ilosone) indicate that hepatic dysfunction with or without clinical jaundice may occur during or following courses of therapy with the drug.

Changes in liver function tests in such cases have been indicative of intrahepatic cholestasis. The symptoms appear to be the result of a form of sensitization. The initial symptoms have developed in some cases after a few days of treatment but generally have followed one or two weeks of continuous therapy or several courses of the drug. Symptoms reappear promptly, usually within forty-eight hours, if the drug is readministered to sensitive patients. Eosinophilia was noted in peripheral blood counts. The findings readily subsided without apparent residual effects when treatment was discontinued. Recovery was delayed in one reported instance. The physician indicated in this case that either drug-induced jaundice or viral hepatitis may have been responsible for the findings.

In one clinical study involving ninety-three patients treated with the antibiotic, three cases of jaundice were observed and an additional eleven cases developed some changes in liver function tests. Three of the patients had abnormal liver function tests a second time on readministration of the drug.

Even though it is assumed that not all cases of jaundice have been reported, it seems clear that the number is small compared with the amount of drug that has been used. Reported cases have included persons in whom there had been administered other drugs known to be associated at times with hepatic side-effects and cases in which the presence of viral hepatitis or other disease may have been responsible for the findings. In some of the cases, associated gastro-intestinal symptoms simulated the colic of biliary tract disease. In other instances, clinical symptoms and results of liver function tests resembled findings in extrahepatic obstructive jaundice. It appears that the occurrence of jaundice after administration of Ilosone is infrequent, but further investigations are being made to estimate its incidence more accurately.

In those cases mentioned above in which jaundice appeared be definitely related to use of the drug, laboratory findings we characterized by increased direct-reacting bilirubin, elevat alkaline phosphatase levels, negative or weakly positive cephal flocculation and thymol turbidity tests, elevated serum glutam oxalacetic transaminase levels, peripheral eosinophilia, and no mal cholecystograms.

Individual idiosyncrasy seems evident since jaundice has n been reported in other patients taking prolonged courses of t medication. Patients with chronic infection have been given 1 to 2 Gm. of the drug daily for periods of two to six months, a patients with rheumatic fever have taken prophylactic doses 0.5 Gm. daily for two years without difficulty. In one group 144 patients who received the drug daily for two years, no jau dice was noted. It was of interest that members of six of the patients' families, who were not taking the drug, had episod of jaundice during the study period.

Transaminase and serum alkaline phosphatase levels we determined in a group of fifty-four adults and children who to 250 mg. of Ilosone daily for an average of sixteen months rheumatic fever prophylaxis. The results were compared wi those of a similar group of forty-four patients who received pe icillin. There were no cases of jaundice in either group. Elevati of SGPT and serum alkaline phosphatase levels during the cour of treatment was observed in one patient treated with Iloso and in two patients treated with penicillin. Seven other patien in the group receiving Ilosone and four others in the penicill group showed elevations in one of the tests at some time duri administration of the drugs.

Very satisfactory therapeutic results, without toxicity, we reported in 102 pediatric patients who received short-term (te day) courses of Ilosone in the treatment of streptococcus infe tions. Results of liver function tests in these patients we comparable to those in a similar control group who had receiv penicillin.

Gastro-intestinal disturbances not associated with hepatic e fects are observed in a small proportion of individuals as a res of a local stimulating effect of the medication on the alimenta tract; however, the normal intestinal gram-negative bacteri flora is not appreciably altered by erythromycin drugs.

Although allergic manifestations are uncommon with the u of erythromycin, there have been occasional reports of urticari skin eruptions, and, on rare occasions, anaphylaxis.

Administration and Dosage: Ilosone is administered orally.

Ilosone Pulvules®, Ilosone Liquid 125, Ilosone, 125, for Or Suspension, Ilosone Drops, Ilosone Chewable Tablets.

For infants and for children under twenty-five pounds of bo weight, the usual dosage is 5 mg. per pound every six hours; f children twenty-five to fifty pounds, 125 mg. every six hou (Tablets Ilosone Chewable should be chewed or crushed a swallowed with water.)

For adults and for children over fifty pounds, the usual dosa of Ilosone is 250 mg. every six hours.

For severe infections, these dosages may be doubled.

When larger doses are indicated, parenteral erythromyc therapy should be considered.

In the treatment of syphilis, the recommended total dosage 20 to 30 Gm. given in divided doses for a period of ten to fifte days. Close follow-up of the patient is necessary since eryth mycin drugs have not had adequate evaluation in all stages syphilis. Examinations of spinal fluid are recommended as pa of the follow-up therapy.

For gonorrhea, 500 mg. four times a day for four days a recommended. In the treatment of gonorrhea, patients with suspected lesion of syphilis should have a dark-field examinati before receiving antibiotics, and monthly serologic tests sho be made for a period of three months.

How Supplied: Pulvules Ilosone, Capsules, N.F., 125 and 250 m (equivalent to base), in bottles of 24 and 100.

Ilosone Liquid 125, Oral Suspension, U.S.P., 125 mg. (equivale to base) per 5-cc. teaspoonful, in 60-cc. and pint-size packag

Ilosone, 125, for Oral Suspension, N.F., 125 mg. (equivale to base) per 5-cc. teaspoonful, in 60 and 150-cc.-size packag

Ilosone Drops, 5 mg. (equivalent to base) per drop, in 10-cc.-si packages, with dropper calibrated at 25 and 50 mg.

Tablets Ilosone Chewable, N.F., 125 mg. (equivalent to bas in bottles of 50. [0327

References: 1. Griffith, R. S., and Black, H. R.: Am. J. M. Sc., *247:*69, 19
2. Griffith, R. S., and Black, H. R.: Antibiotics & Chemother., *12:*398, 19
3. Hirsch, H. A., Pryles, C. V., and Finland, M.: Am. J. M. Sc., *239:*198, 1960.

Additional information available to physicians upon request.
Eli Lilly and Company, Indianapolis, Indiana 46206.

Lilly

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Book Reviews

DISORDERS OF THE RESPIRATORY TRACT IN CHILDREN edited by Edwin L. Kendig, Jr., M. D. W. B. Saunders Company, Philadelphia and London, 1967. $26.00

In this volume of almost 800 pages, the editor has utilized the contributions of 29 writers, almost all pediatricians, to produce a well-planned, attractive and informative book which covers very adequately most aspects of respiratory disease in children. The initial chapter, a review of pulmonary physiology and function, followed by chapters on history and physical examination, and diagnostic and therapeutic procedures, form an excellent base on which subsequent discussions of various disease states and other conditions affecting the chest are arranged. Disorders of the entire respiratory tract from the ear, nose and throat area to alveoli, including extrapulmonary-thoracic but not cardiac disorders, are covered. Discussions of congenital and developmental abnormalities, infections, neoplasms, and non-infectious conditions are included. While much of the material presented applies primarily to children a great part is equally applicable to the non-pediatric age group. Thus the practicing generalist, the internist and general surgeon, as well as the pediatrician and other specialty physicians, should find the book a very useful source of helpful and worthwhile information in concise but complete form.

Kelly T. McKee, M. D.

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SCLERODERMA by Marvin A. Sackner, M. D. Grune and Stratton, New York. $13.75.

In his preface, Dr. Sackner makes it clear that there has been no full book or monograph dealing strictly with scleroderma. On checking my books and files, I found that my references were all scattered, with no complete summary. This book provides this most needed grouping of all the recent information and advances in the management, diagnosis, and treatment of scleroderma. The recently popular CRST (Calcinosis, Raynaud's phenomenon, Sclerodactyly, and Telangiectasis) is described in detail.

Since skin changes occur in the majority of patients with scleroderma, sometimes providing the first indication of the disease, the dermatologist often is the first to see the patient and make the diagnosis. Nevertheless, with prognosis worse in this condition than in the better known and more often seen systemic lupus erythematosus, the management of scleroderma, except in the localized morpheic types, should be a multidiscipline approach.

The book is divided into detailed reviews of each system involved in the disease. The final chapter on review of therapy is somewhat disappointing, stating that no single agent or method of treatment has much effect on the condition, although para-aminobenzoic acid is thought to be helpful. A new method of treatment of ulcerations of the extremities by topical oxygen therapy is not included, but has, in my hands, been of distinct value.

This is an excellent book, well written and comprehensive.

John van de Erve, M. D.

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HEARTS: THEIR LONG FOLLOW-UP by Paul Dudley White, M. D., Helen Donovan. W. B. Saunders Company, 1967. $12.00.

During the past several years there have been many epidemiologic cardiac research projects with hundreds of individuals in population studies. This book deals with the long term follow-up of individual patients and shows that such studies are equally important. This brings into good perspective the need for good office records and the potential interesting studies that one can do during his practice of medicine. Each chapter is illustrated by summarized records of patients with some illustrations. The references are extensive and up to date. This book also establishes the natural history of various cardiac lesions for comparison with the effect of the many new medical and surgical therapeutic and preventive measures that are being constantly introduced. It is clearly written and is an important adjunct in the library of all physicians and medical students, regardless of what specialized interest they may have.

P. C. Gazes, M. D.

———

CLINICAL PATHOLOGY INTERPRETATION AND APPLICATION, by Benjamin B. Wells, M. D., Ph. D. and James A. Halsted, M. D. 4th Edition. W. B Saunders Co, Philadelphia and London, 1967 Pp. 708. $11.50.

This established clinical pathology text continues to grow in value with successive editions. Beginning with the belief that the evaluation of laboratory data and its integration with clinical observations is now one of the most important functions of the physician, the authors procede to discuss the applications and limitations of generally available laboratory tests in common clinical problems. In this discussion emphasis is placed on the concept of normality, on the significance of variations from the normal, on the importance of laboratory quality control in evaluation of such variations, and on the effective utilization of the laboratory director as a consultant in the interpretation of such laboratory data. (The section of quality control methods in the clinical laboratory is among the best short reviews available). Throughout the book the authors excel in providing concise understandable descriptions of new procedures and ideas. Thus, for instance, the sections on cytogenetics and chromosome analysis and on hereditary disorders and their investigation are superlative. By comparison, the discussion of standard tests often seems ordinary, and the inclusion of clinical states lacking a noteworthy diagnostic clinical laboratory aspect, such as Meckel's diverticulum, seems superfluous. The book ends with discussion of the principles underlying those laboratory tests which the average physician may be expected to perform or supervise, without emphasis on methodology.

This book has great practical value, not only as a basic clinical pathology text, but also as a concise review and authoritative reference source. It is thus recommended without reservation as a standard fixture for the physician's library.

George F. Stevenson, M. D.

CONGESTIVE HEART FAILURE, by Ralph M. Myerson and Bernard H. Pastor. The C. V. Mosby Co., St. Louis, 1967. Pp. 174. Price $12.85.

A fairly straightforward and up-to-date presentation of the subject, though not a particularly inspired one. This appears to be a small, overpriced monograph which contains somewhat more background material than the average top-quality textbook of internal medicine.

John A. Boone, M. D.

THE GOLDEN TWENTY-SIX YEARS, J. E. Crosland, M. D., Greenville, S. C. 1967. Pp. 45.

Twenty-six years of practice do not make a record for durability in medicine, but in this case they afford many interesting and amusing experiences and reflections. Written by a general family physician, this small book offers the author's opinions on a variety of matters ranging from Medicare to investments, recreation and a number of other pertinent subjects. It makes interesting reading.

JIW

HUMAN DEVELOPMENT, Frank Falkner, Ed., W. B. Saunders Company, Philadelphia. 1966, pp 644. $20.00.

This book, edited by the chairman of pediatrics at the University of Louisville, contains chapters written by 29 individuals from the U. S., Denmark, France and Norway, representing the fields of epidemiology, internal medicine, microbiology, anthropology, ophthalmology, radiology, obstetrics and gynecology, physiology, gerontology, chemistry, and embryology.

It is written for the physician and for the basic scientist concerned with human development. Embryological development is not emphasized; perinatal and postnatal development is stressed, an area too frequently neglected by those interested in human development.

Special topics include developmental genetics, physiological growth, developmental aspects of biochemistry and psychological development. Also included are discussions of the development of the nervous system, bone, dentition and immunity.

The format is attractive; many illustrations are included, and the bibliography is adequate. I recommend the book to pediatricians and to all who are concerned with human development.

However, I must confess that I was rather startled to read the following statements in the chapter on hormonal influences on development, by a Danish pediatrician; (1) "The ovum floats within the uterus for *three to four weeks* before nidation." (2) "During the first trimester pregnancy is supported by estrogens and progesterone, produced by the *cells of Langhans within the corpus luteum.*" To my knowledge, these statements are incorrect. The corpus luteum does produce the gestational hormones of early pregnancy, but the cells of Langhans are a part of the fetal contribution to the placenta and produce the gestational hormones during and after regression of the corpus luteum.

Elsie Taber, Ph. D.

MODERN TREATMENT: Vol. IV, No. 1. Treatment of Complications of Diabetes. Edited by Charles Shuman, M. D. January 1967; Harper & Row, Publishers.

The symposium on the treatment of complications of diabetes covers a variety of difficult situations encountered in the diabetic patient. Most of these are degenerative in type, and the commonest complication of all, acidosis, is completely omitted from the discussion.

The section on the treatment of resistant diabetes by Dr. J. B. Field is well done but quite complicated and would be extremely difficult for the average physician to understand. Dr. Field does not make clear the different types of insulin resistance—that due to the previous injections of insulin itself, and the other types associated with sinalbumin. It is doubtful if the plans of therapy recommended could be undertaken by anyone except the physician interested in this type of problem.

In the section on the treatment of diabetic neuropathy Dr. Ellenberg seemed to take it for granted that all of the neurologic disease in the diabetic must be the result of diabetes. This is by no means settled and there is substantial thought that many of these conditions are simply nervous system degenerative changes occurring in a patient who happens to have incidental diabetes. The relationship between diabetes and the development of neurologic changes is by no means clear and it is certainly not simply the result of disturbed carbohydrate metabolism. Almost half—to be exact, 8 of 17 references, cited by Dr. Ellenberg are to previous writings of Dr. Ellenberg himself. In his discussion of diabetic enteropathy he states that the question as to whether these

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cases represent a coincidental occurrence of diabetes and nontropical sprue, or whether they are specific manifestations of diabetes is fascinating but not germane to the subject of this discourse. It would appear that this is not a truly scientific approach to a very difficult problem.

The remainder of the symposium is very good and a number of helpful suggestions are offered.

Robert Wilson, M. D.

BLACK MARKET MEDICINE. By Margaret Kreig. Prentice-Hall, Inc., Englewood Cliffs, N. J. 1967. 336 pp. $5.95.

This book is a revelation of the tremendous illicit trafficing in drugs that afflicts our country in spite of efforts of the Food and Drug Administration. It describes a racket comparable to the illegal dealing in many other commodities much less important to our health.

Many popular and potent drugs are counterfeited in shabby and dirty establishments, where the external shape and form of the tablet or other preparation may be closely initiated, while potency is reduced or completely eliminated, leaving truly an ineffectual "sugarpill." The danger in the unsuspecting use of such "drugs" is obvious when the patient is dependent on a true drug action.

Large shipments of honest medicine are sometimes hijacked, and the still marketable goods sold through doubtful channels. Unscrupulous handlers may change labels, or sell drugs that are out of date. Formulae may be stolen from reputable manufacturers and products produced elsewhere more cheaply and less carefully.

The Food and Drug Administration has limited powers of investigation and control. Better legal armament would be helpful. The regular and reasonable inspection of all pharmaceutical manufacturing plants would be useful in eliminating the "bootleg" producer. And if human nature could be improved so that there would be no occasional renegade among manufacturers, hospital administrators, pharmacists, and physicians, the solution would be simple.

This exposure of the poor quality of many products casts some logical doubt on the attempt of Federal agencies to insist on prescription of "generic" drugs which carry no reassuring label of tried and true pharmaceutical firms.

An interesting account.

J. I. W.

Deaths

Dr. Warren Hamilton Burgess

Dr. Warren Hamilton Burgess, 78, died May 18 at Tuomey Hospital, Sumter.

A native of Stateburg, Dr. Burgess was a graduate of the Medical College of South Carolina and a veteran of World War I, serving with the Medical Corps. He was city physician for over 41 years.

In 1945 he was presented with a silver service by the Pilot, Lions, Kiwanis and Rotary clubs as an outstanding citizen for unselfish service to his community.

Dr. T. Willard Reynolds

Dr. T. Willard Reynolds, Chief of Staff of St. Francis Xavier Hospital and a general practitioner in Charleston for 28 years, died June 2.

Dr. Reynolds was born in Charleston, Jan. 15, 1909. He was graduated from the College of Charleston and from the Medical College of South Carolina in 1937, where he was president of Phi Chi fraternity and the student body. He served his internship at Mercy Hospital in Baltimore.

He was a member of the Medical Society of South Carolina, the Charleston County Medical Society, the South Carolina Medical Association, the American Medical Association, the American Academy of General Practice and the Medico Chi Society.

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IN BRIEF.

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Precautions: Hypotensive reactions are rare, but use with caution where complications could ensue from a fall in blood pressure, especially in the elderly. Withdrawal symptoms upon discontinuation have been noted in some patients exhibiting drug dependence through chronic overdose. Carefully supervise dose and amounts prescribed, especially for patients prone to overdose; excessive, prolonged use in susceptible patients (alcoholics, ex-addicts, etc.) may result in dependence or habituation. Reduce dosage gradually after prolonged excessive dosage to avoid possible epileptiform seizures. Withdrawal symptoms following abrupt discontinuance are similar to those seen with barbiturates. Caution patients against driving or operating machinery until absence of drowsiness or dizziness is ascertained. Warn patients of possible reduction in alcohol tolerance. Safety for use in pregnancy has not been established.

Not indicated in children under 6 years; absolute dosage for 6- to 12-year-olds not established.

Side Effects: Therapy-interrupting side effects are rare. Transient mild drowsiness is common initially; if persistent, reduce dosage. Dizziness, vertigo and headache have also occurred infrequently; syncope, rarely. Mild paradoxical reactions (excitement, stimulation of affect) are reported in psychiatric patients. Minor diffuse rashes (morbilliform, urticarial and maculopapular) are rare. Nausea, lethargy, edema, slurred speech, tremor and altered libido are rare and generally controllable by dosage reduction. Although rare, leucopenia and hepatic dysfunction including jaundice have been reported during therapy. Periodic blood counts and liver function tests are advised. Ataxia, reported rarely, does not appear related to dose or age.

These side reactions, noted with related compounds, are not yet reported: paradoxical excitation with severe rage reactions, hallucinations, menstrual irregularities, change in EEG pattern, blood dyscrasias (including agranulocytosis), blurred vision, diplopia, incontinence, stupor, disorientation, fever and euphoria.

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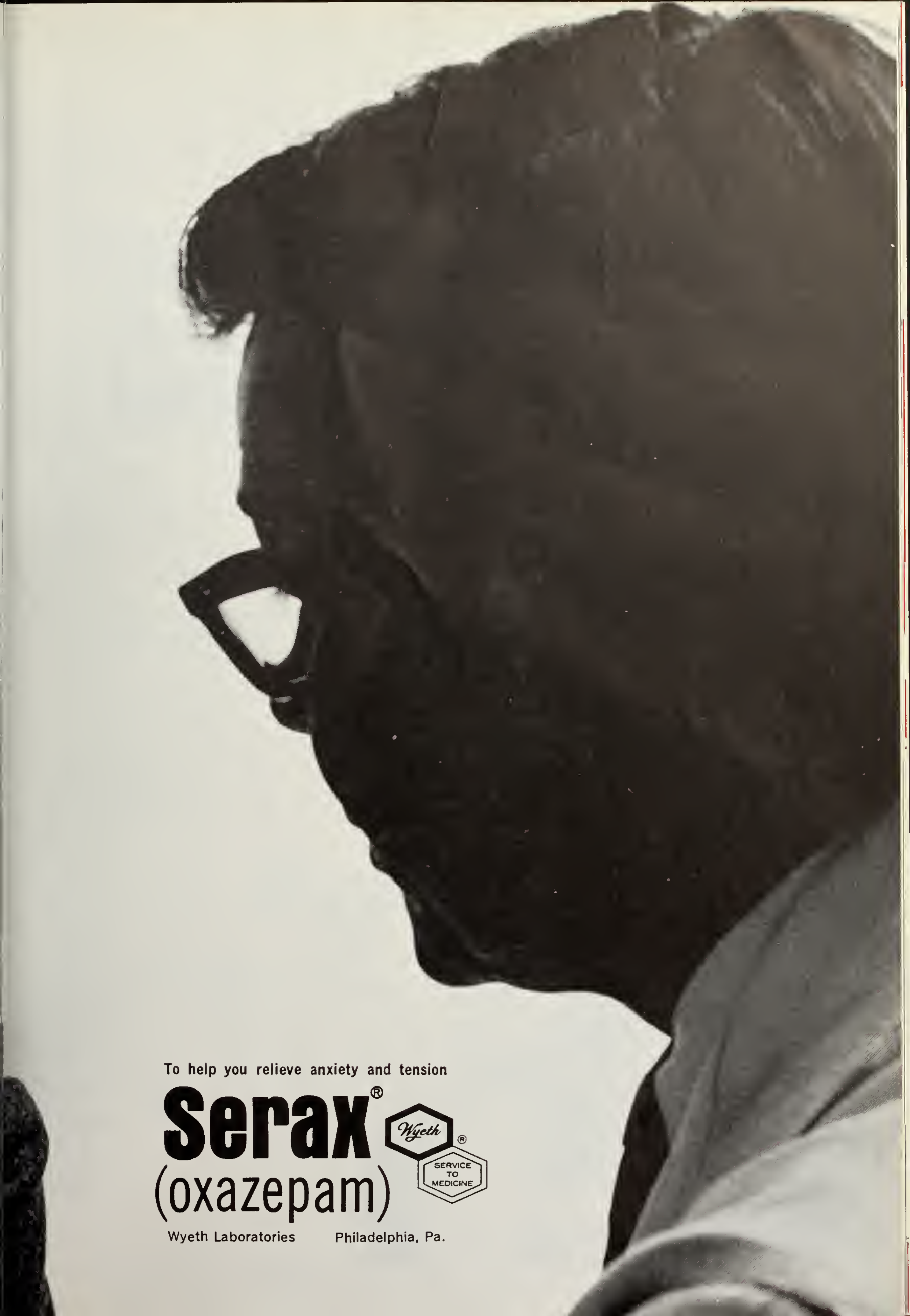

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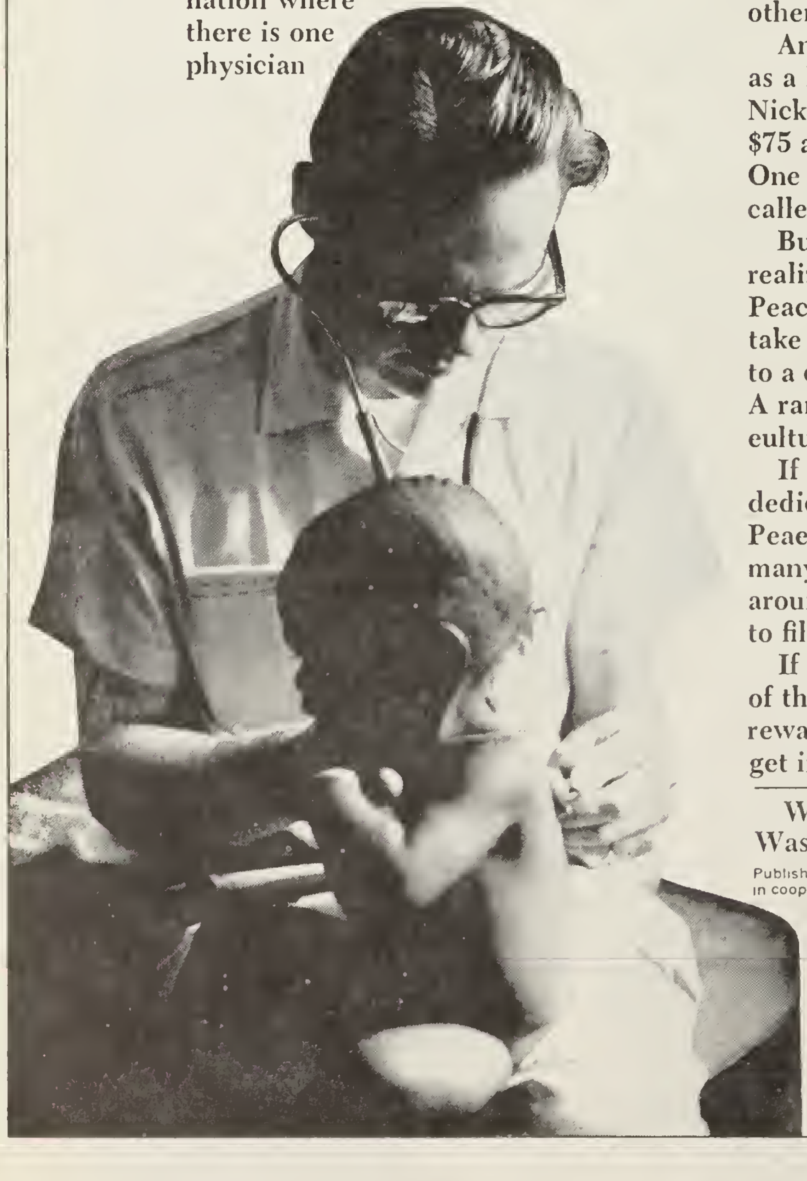

And for his two-year stretch as a Peace Corps doctor, Nick Cunningham’s pay was only $75 a month — plus living expenses. One reason why his colleagues called him crazy.

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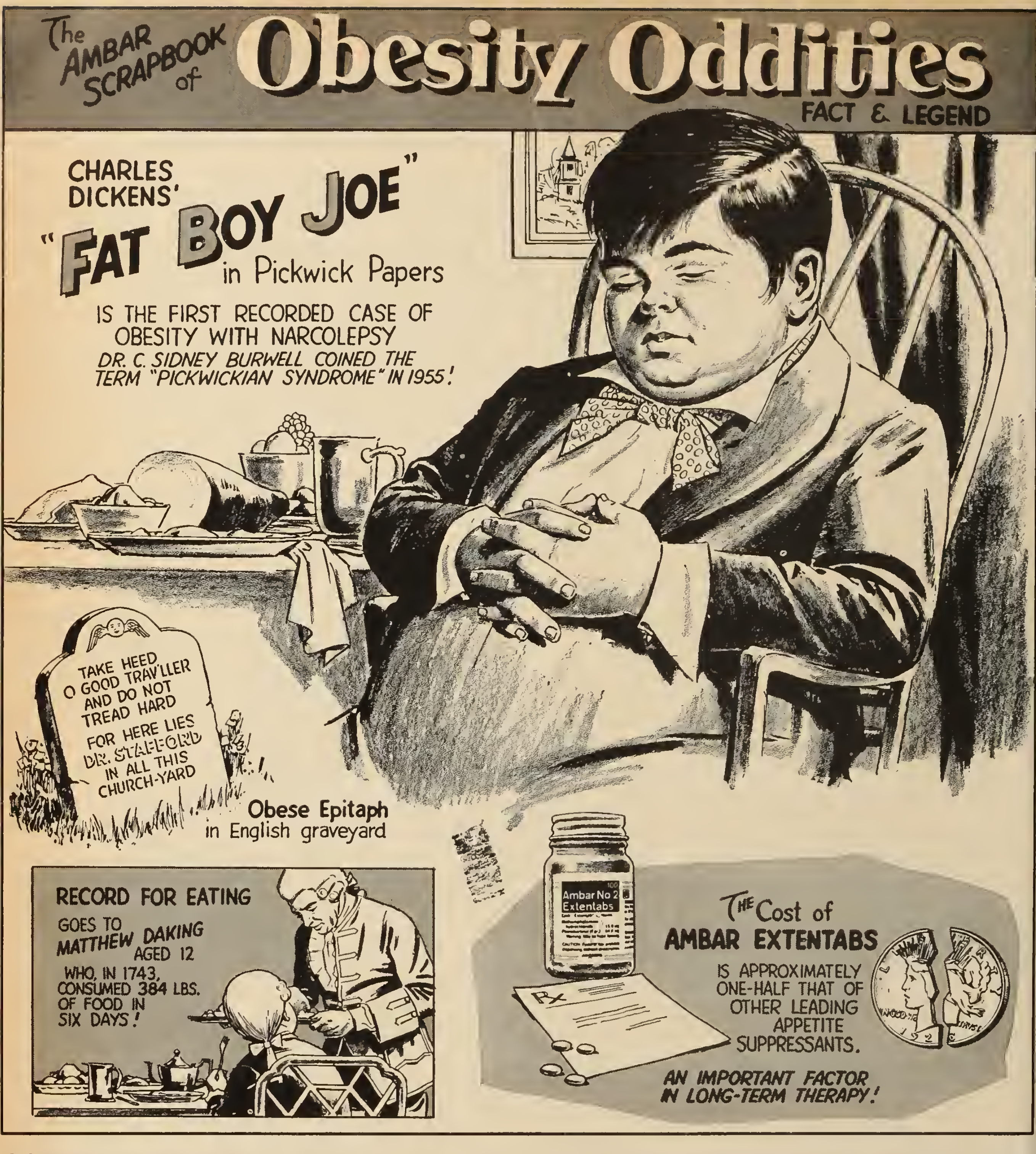
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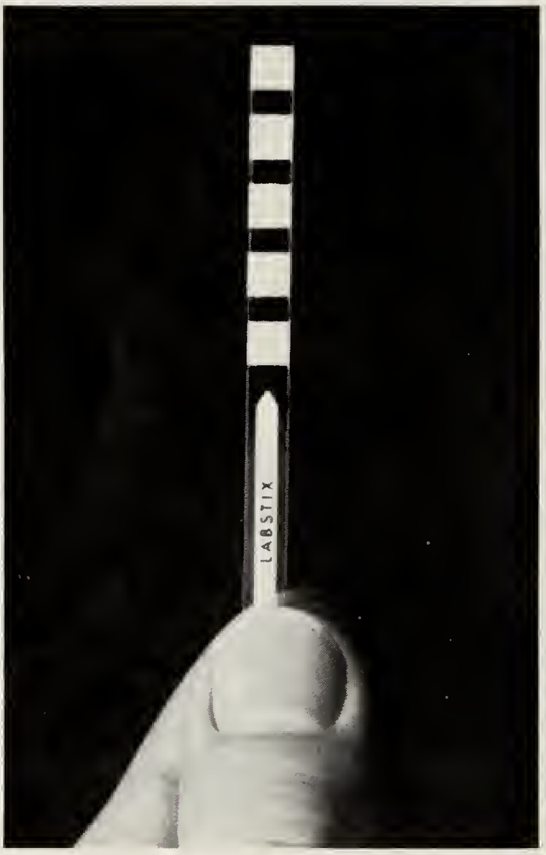

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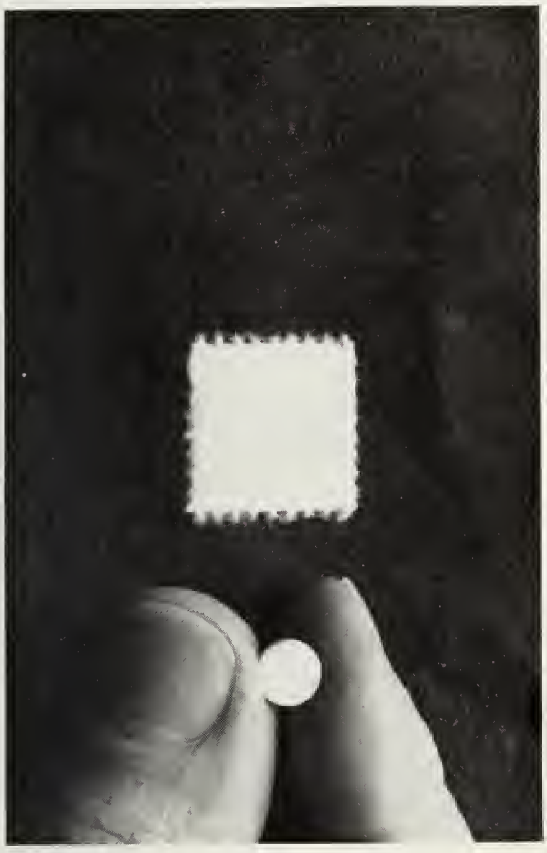

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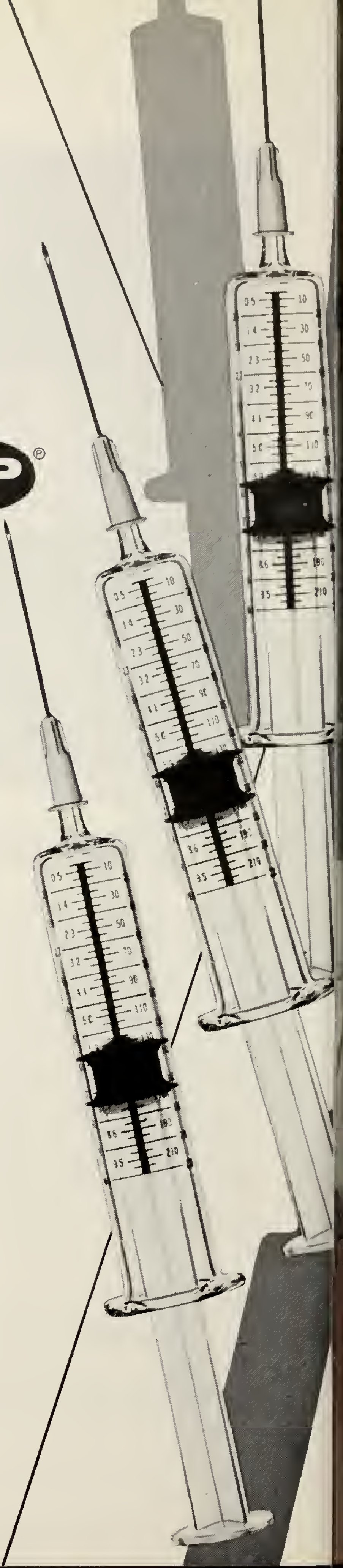

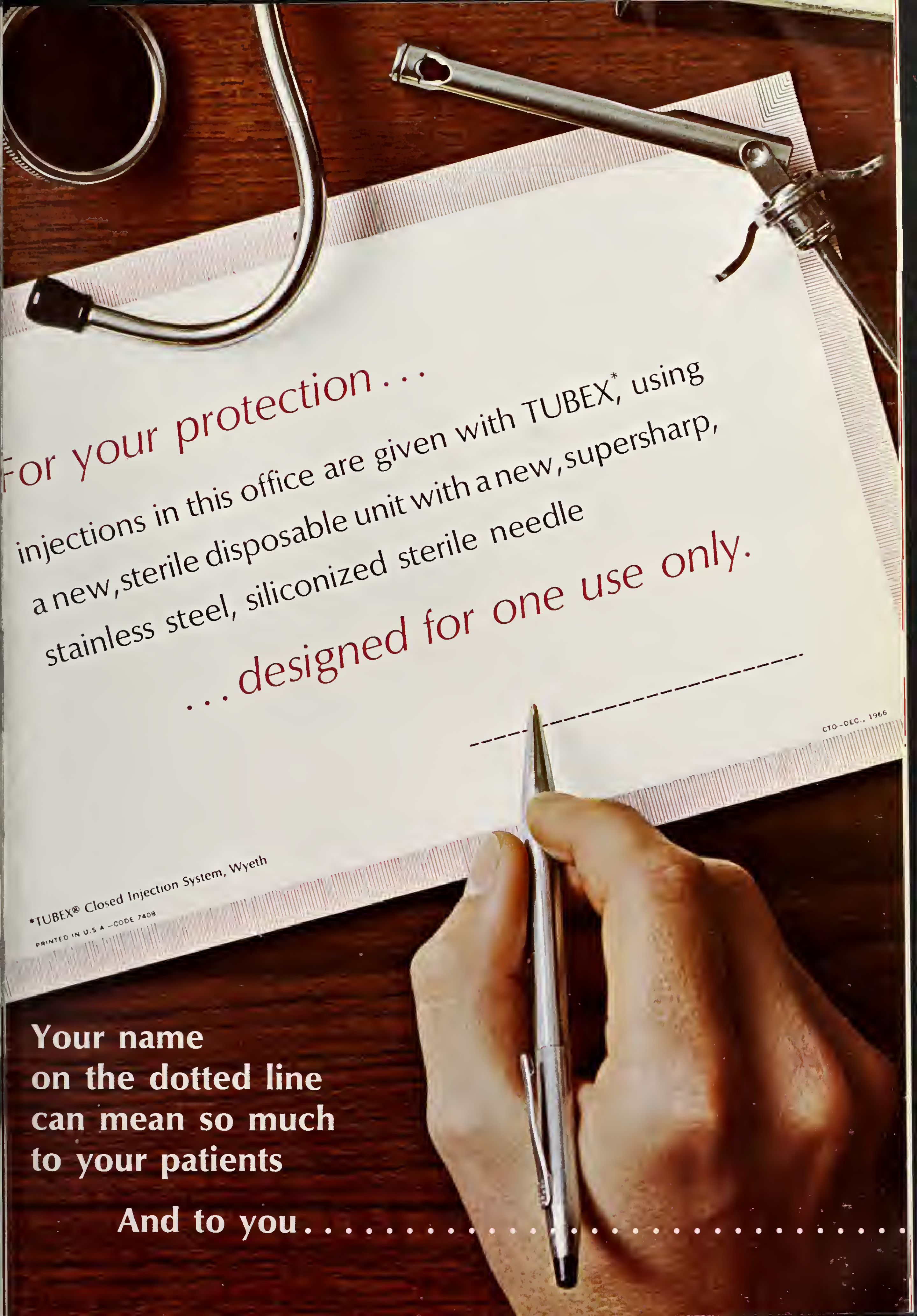

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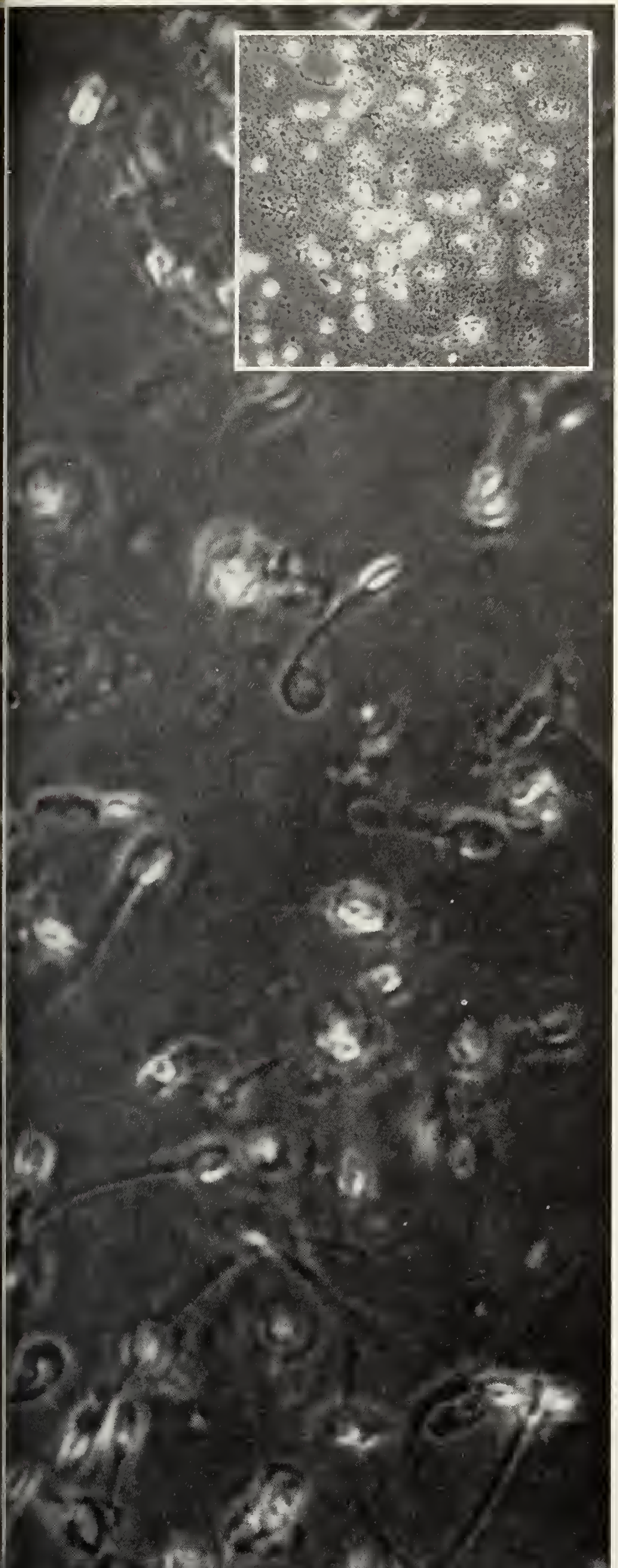


New view of an oral contraceptive at work

Although suppression of ovulation remains the primary mode of action of oral contraceptives, newer knowledge indicates that products like Norinyl-1 — a combination of both low-dosage progestogen and estrogen for the full treatment cycle — may provide multiple action that helps explain their unexcelled record of contraceptive effectiveness. This report explores the possible secondary protective mechanisms offered by combined hormonal administration.

Accumulating evidence has indicated that sparse, highly viscous cervical mucus has a possible adverse effect on the motility and survival of spermatozoa.

The estrogen-opposing progestational ingredient of Norinyl-1 (norethindrone 1 mg. with mestranol 0.05 mg.) changes the usual midcycle picture of a thin, watery cervical mucus. The result — a built-in barrier that appears to inhibit sperm from reaching the ovum should one be released. The inset in the adjoining photograph shows immobile spermatozoa as they appear in cervical mucus taken from a patient treated with Norinyl-1.

See last page for contraindications, precautions, side effects and dosage.

How the estrogen-opposing action of Norinyl-1 creates cervical mucus that may be hostile to sperm penetration

Normally, estrogen activity during the fertile midcycle stimulates the production of a profuse and watery cervical mucus that permits maximum sperm motility and promotes penetration.

But what happens when Norinyl-1 is administered? Its potent progestogen, norethindrone, opposes estrogen stimulation of cervical mucus. Consequently, the amount of mucus decreases and its viscosity increases. This results in a sparse but thick mucus barrier that appears to diminish the vitality of the sperm and to impair its powers of penetration.

The role of viscous cervical mucus as a secondary action of Norinyl-1

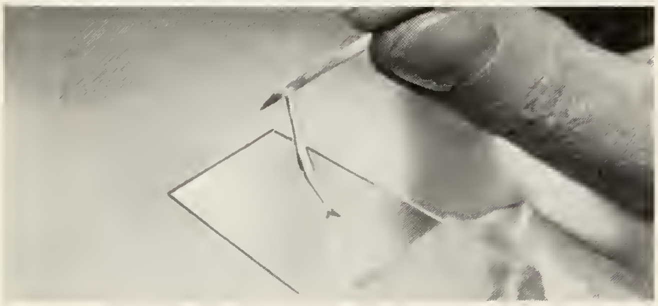
In a report on 89 patients taking this medication,* cervical mucus obtained from cycle day 5 to cycle day 29 appeared scant and thick and exhibited little or no Spinnbarkeit.

In the opinion of this investigator, the effect on cervical mucus may be sufficient to prevent conception.

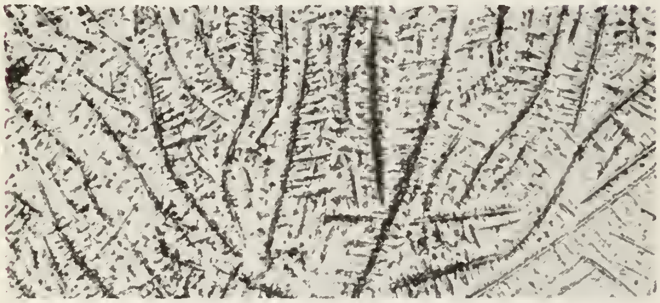
---

*Cohen, M. R.: Symposium: Mechanisms of Action of Low Dosage Oral Contraceptive, Yale University Medical Center, New Haven, Conn., April 6, 1967.

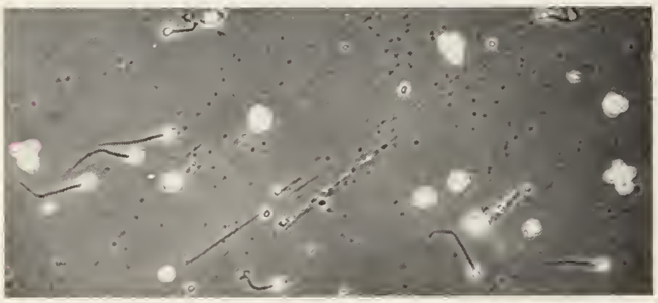
Normal cervical mucus at midcycle in untreated patient is known to permit sperm motility... promote sperm penetration.



Cervical mucus is thin and watery with a stretchability (Spinnbarkeit) of 15 to 20 cm.

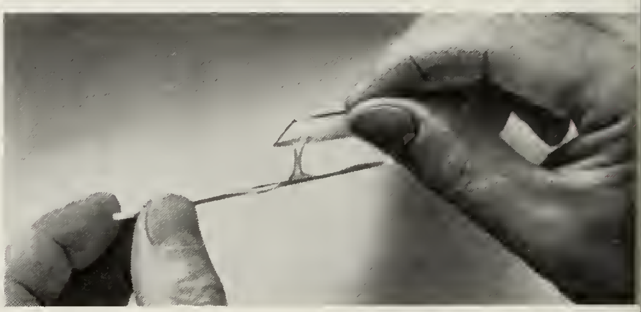


Thin, watery mucus crystallizes into this well-defined, fernlike pattern within a minute.

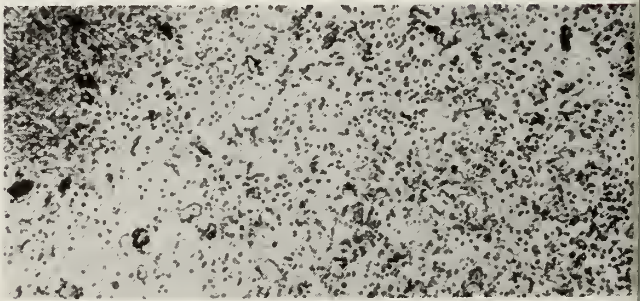


Spermatozoa appear healthy, are active and freemoving.

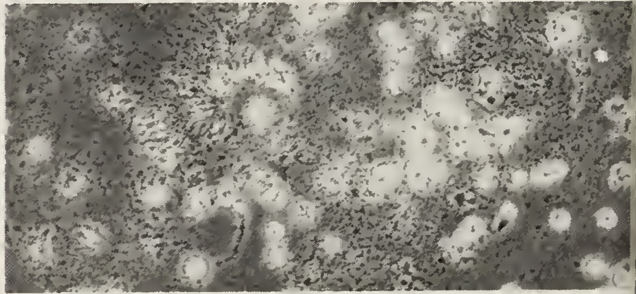
Viscous cervical mucus at midcycle produced by Norinyl-1 appears to impair sperm vitality... inhibit penetration.



Cervical mucus is scanty, thick and viscous. Spinnbarkeit is 1 cm. or less.



In thick, viscous cervical mucus the fern pattern is poorly defined or absent.

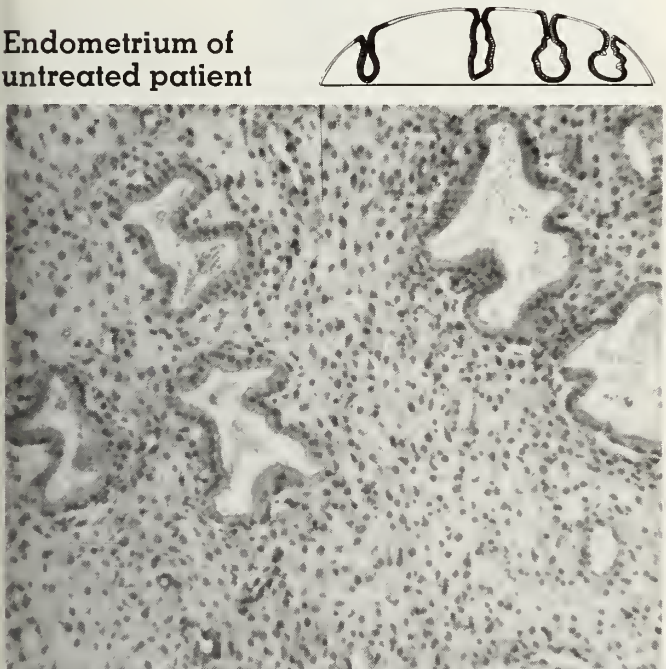


Immobile spermatozoa as they appear in cervical mucus taken from a patient treated with Norinyl-1.

How Norinyl-1 alters normal endometrial responses– another possible protective mechanism

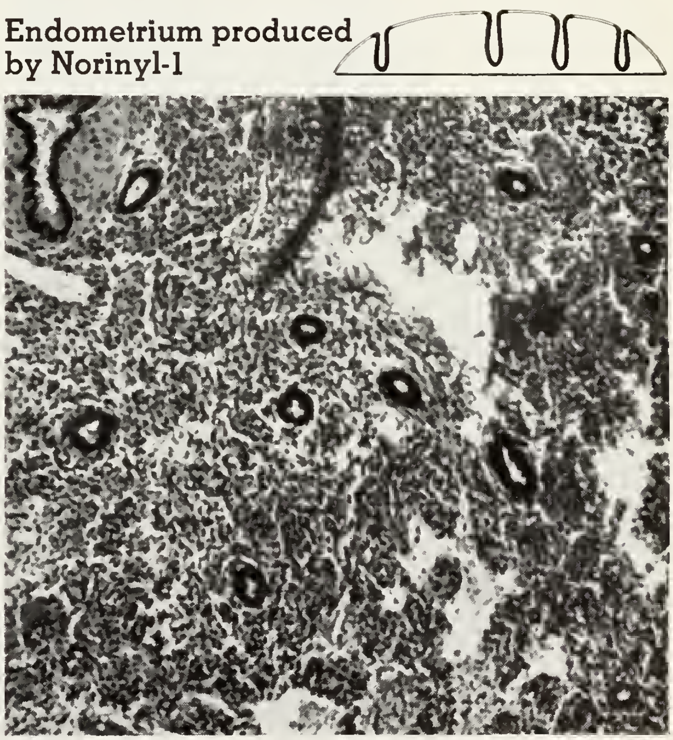
Let us suppose that an ovum is released—as occurs in an occasional, rare case—and somehow a sperm succeeds in penetrating the cervical mucus barrier. Should this come about, one additional action of Norinyl-1 may protect the patient from unwanted pregnancy. The theory is that progestogen intake makes endometrial tissue unreceptive to implantation.

Endometrium of untreated patient



Normally, the endometrium progresses through a proliferative phase stimulated by estrogen and a secretory phase stimulated by progesterone. During the secretory phase the endometrium is receptive to the fertilized ovum.

Endometrium produced by Norinyl-1



When Norinyl-1 is administered its progestogen component—norethindrone—accelerates the secretory phase and suppresses glandular and vascular development.

See last page for contraindications, precautions, side effects and dosage.

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effective fertility control
on half the previous dosage

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Reduction of oral contraceptive dosage to lowest effective levels has become a well-accepted principle of conservative medical practice. In keeping with this view, Norinyl is now available in a new strength in which *both* norethindrone and mestranol are reduced 50 percent. Studies show that Norinyl-1 achieves fertility control with only 1.05 mg. of combined progestogen and estrogen per tablet.

Norethindrone was first reported for use as a progestational agent in human beings in 1955. Norethindrone 2 mg. with mestranol 0.1 mg., as an oral contraceptive, is currently in use by over 2,000,000 women. Clinical experience now establishes that Norinyl-1 also amply meets the criteria of reliability and safety.*

*Symposium on Low-Dosage Oral Contraception, Palo Alto, Calif., July 15, 1965.

PRESCRIBING INFORMATION

Contraindications: 1. Patients with thrombophlebitis or with a history of thrombophlebitis or pulmonary embolism. 2. Liver dysfunction or disease. 3. Patients with known or suspected carcinoma of the breast or genital organs. 4. Undiagnosed vaginal bleeding.

Warnings: 1. Discontinue medication pending examination if there is sudden partial or complete loss of vision or if there is a sudden onset of proptosis, diplopia, or migraine. If examination reveals papilledema or retinal vascular lesions, medication should be withdrawn. 2. Since the safety of Norinyl-1 in pregnancy has not been demonstrated, it is recommended that for any patient who has missed two consecutive periods, pregnancy should be ruled out before continuing the contraceptive regimen. If the patient has not adhered to the prescribed schedule, the possibility of pregnancy should be considered at the time of the first missed period. 3. Detectable amounts of the active ingredients in oral contraceptives have been identified in the milk of mothers receiving these drugs. The significance of this dose to the infant has not been determined.

Precautions: 1. The pretreatment physical examination should include special reference to breast and pelvic organs, as well as a Papanicolaou smear. 2. Endocrine and possibly liver function tests may be affected by treatment with Norinyl-1. Therefore, if such tests are abnormal in a patient taking Norinyl-1, it is recommended that they be repeated after the drug has been withdrawn for 2 months. 3. Under the influence of estrogen-progestogen preparations, preexisting uterine fibroids may increase in size. 4. Because these agents may cause some degree of fluid retention, conditions that may be influenced by this factor, such as epilepsy, migraine, asthma, cardiac, or renal dysfunction, require careful observation. 5. Although a cause and effect relationship has not been established, Norinyl-1 should be used with caution in patients with a history of cerebrovascular accident. 6. In relation to breakthrough bleeding, as in all cases of irregular bleeding per vaginam, nonfunctional causes should be borne in mind. In cases of undiagnosed vaginal bleeding, adequate diagnostic measures are indicated. 7. Patients with a history of psychic depression should be carefully observed and the drug discontinued if the depression recurs to a serious degree. 8. Any possible influence of prolonged Norinyl-1 therapy on pituitary, ovarian, adrenal, hepatic or uterine function awaits further study. 9. A decrease in glucose tolerance has been observed in a small percentage of patients on oral contraceptives. The mechanism of this decrease is obscure. For this reason, diabetic patients should be carefully observed while receiving Norinyl-1 therapy. 10. Because of the occasional occurrence of thrombophlebitis and pulmonary embolism in patients taking oral contraceptives, the physician should be alert to the earliest manifestations of the disease. A cause and effect relationship has not been demonstrated. 11. Because of the effects of estrogens on epiphyseal closure, Norinyl-1 should be used judiciously in young patients in whom bone growth is not complete. 12. The age of the patient constitutes no absolute limiting factor, although treatment with Norinyl-1 may mask the onset of the climacteric. 13. The pathologist should be advised of Norinyl-1 therapy when relevant specimens are submitted.

Side Effects: The following adverse reactions have been observed with varying incidence in patients receiving oral contraceptives: nausea, vomiting, gastrointestinal symptoms, breakthrough bleeding, spotting, change in menstrual flow, amenorrhea, edema, chloasma, breast changes (tenderness, enlargement and secretion), loss of scalp hair, change in weight (increase or decrease), changes in cervical erosion and cervical secretions, suppression of lactation when given immediately postpartum, cholestatic jaundice, erythema multiforme, erythema nodosum, hemorrhagic eruption, migraine, rash (allergic), itching, rise in blood pressure in susceptible individuals, mental depression.

The following occurrences have been observed in users of oral contraceptives. A cause and effect relationship has not been established: thrombophlebitis, pulmonary embolism, neuroocular lesions.

The following laboratory results may be altered by the use of oral contraceptives: increased bromsulphalein retention and other hepatic function tests, coagulation tests (increase in prothrombin, factors VII, VIII, IX and X), thyroid function (increase in PBI and butanol extractable protein-bound iodine and decrease in T^3 values), metapyrone test, pregnanediol determination.

Other side effects reported to have occurred in association with use of this drug are dizziness, hirsutism, pains in legs, back, chest and abdomen, dysuria, drowsiness, vaginal discharge, libido increased and decreased, eruptions, hypermenorrhea, hypomenorrhea, increased appetite, G.U. infections, varicose veins, abdominal fullness, acne, headache, nervousness, allergies, blurred vision, pain in eyes, and itching in eyes. *For complete clinical data, see package insert.*

Dosage and Administration: 1. One tablet of Norinyl-1 is administered orally for 20 days beginning on day 5 of the menstrual cycle. (Count day 1 of the cycle as the first day of menstrual bleeding.) Repeat this dosage schedule for each cycle. 2. If no menstrual period occurs after a cycle of treatment (20 tablets) in which patient adhered to the schedule, the patient must be instructed to resume taking the Norinyl-1 tablets 7 days after the previous 20-day course was completed. For example, if the last pill of a previous cycle had been taken on a Sunday, then a new cycle of treatment should begin on the following Sunday. 3. In the postpartum woman, it is recommended that the first cycle of treatment should begin on day 5 of the first menstrual cycle. However, Norinyl-1 should not be administered during lactation.

Availability: Norinyl-1 (norethindrone 1 mg. with mestranol 0.05 mg.)—Dispensers of 20 and 60 and bottles of 250 tablets.

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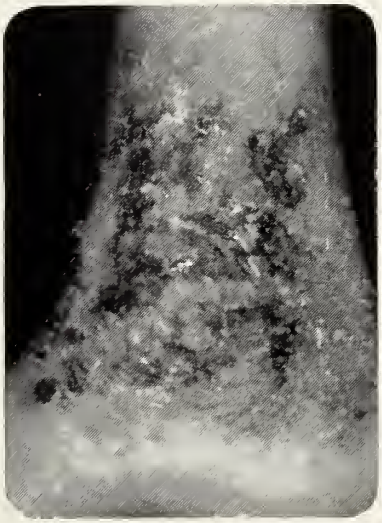
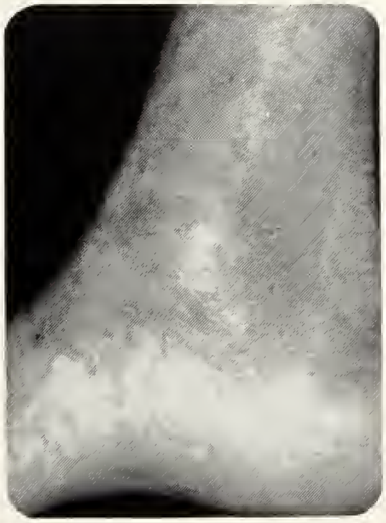


Before treatment



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Precautions: In the elderly and debilitated, and in children over six, limit to smallest effective dosage (initially 10 mg or less per day) to preclude ataxia or oversedation, increasing gradually as needed and tolerated. Not recommended in children under six. Though generally not recommended, if combination therapy with other psychotropics seems indicated, carefully consider individual pharmacologic effects, particularly in use of potentiating drugs such as MAO inhibitors and phenothiazines. Observe usual precautions in presence of impaired renal or hepatic function. Paradoxical reactions (e.g., excitement, stimulation and acute rage) have been reported in psychiatric patients and hyperactive aggressive children. Employ usual precautions in treatment of anxiety states with evidence of impending depression; suicidal tendencies may be present and protective measures necessary. Variable effects on blood coagulation have been reported very rarely in patients receiving the drug and oral anticoagulants; causal relationship has not been established clinically.

Adverse Reactions: Drowsiness, ataxia and confusion may occur, especially in the elderly and debilitated. These are reversible in most instances by proper dosage adjustment, but are also occasionally observed at the lower dosage ranges. In a few instances syncope has been reported. Also encountered are isolated instances of skin eruptions, edema, minor menstrual irregularities, nausea and constipation, extrapyramidal symptoms, increased and decreased libido—all infrequent and generally controlled with dosage reduction; changes in EEG patterns (low-voltage fast activity) may appear during and after treatment; blood dyscrasias (including agranulocytosis), jaundice and hepatic dysfunction have been reported occasionally, making periodic blood counts and liver-function tests advisable during protracted therapy.

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Length—Short articles of about 2,500 words (about 8 typewritten pages, double spaced) are preferred. Longer articles ordinarily will defer to the shorter ones in schedule of publication.

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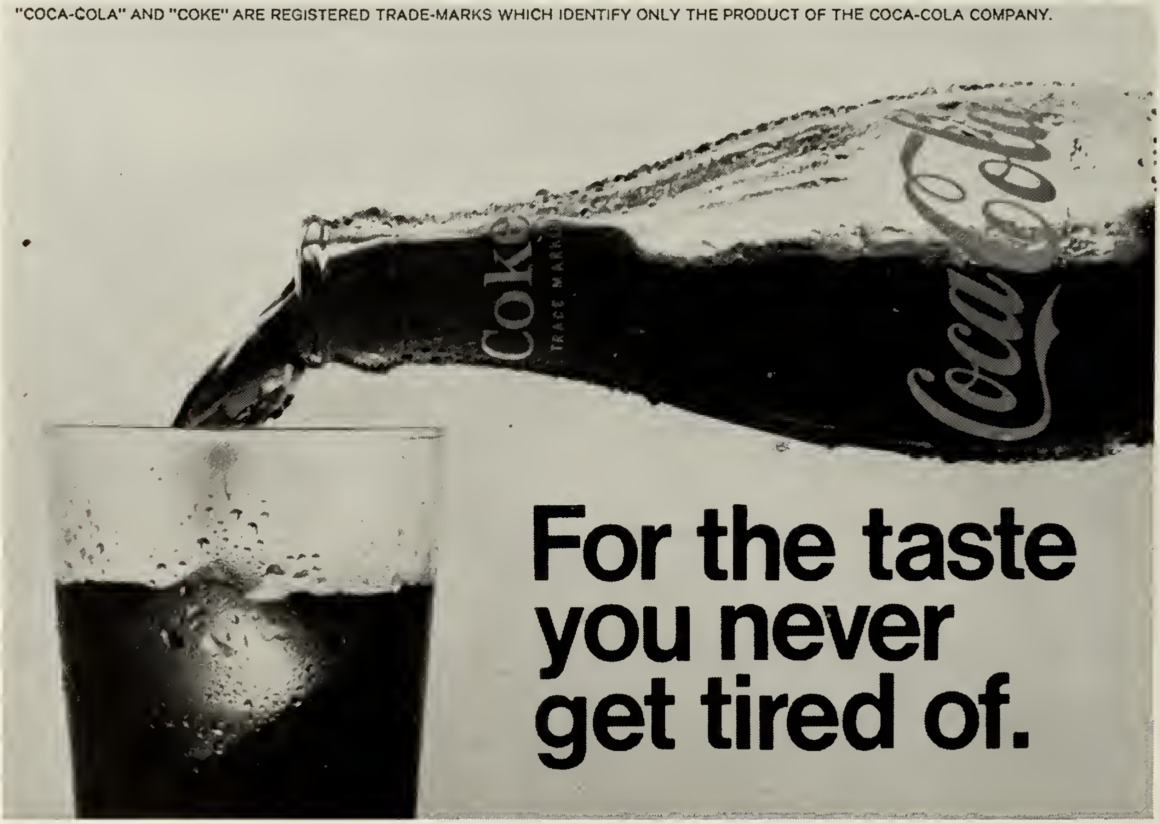

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Not indicated in children under 6 years; absolute dosage for 6- to 12-year-olds not established.

Side Effects: Therapy-interrupting side effects are rare. Transient mild drowsiness is common initially; if persistent, reduce dosage. Dizziness, vertigo and headache have also occurred infrequently; syncope, rarely. Mild paradoxical reactions (excitement, stimulation of affect) are reported in psychiatric patients. Minor diffuse rashes (morbilliform, urticarial and maculopapular) are rare. Nausea, lethargy, edema, slurred speech, tremor and altered libido are rare and generally controllable by dosage reduction. Although rare, leucopenia and hepatic dysfunction including jaundice have been reported during therapy. Periodic blood counts and liver function tests are advised. Ataxia, reported rarely, does not appear related to dose or age. These side reactions, noted with related compounds, are not yet reported: paradoxical excitation with severe rage reactions, hallucinations, menstrual irregularities, change in EEG pattern, blood dyscrasias (including agranulocytosis), blurred vision, diplopia, incontinence, stupor, disorientation, fever and euphoria.

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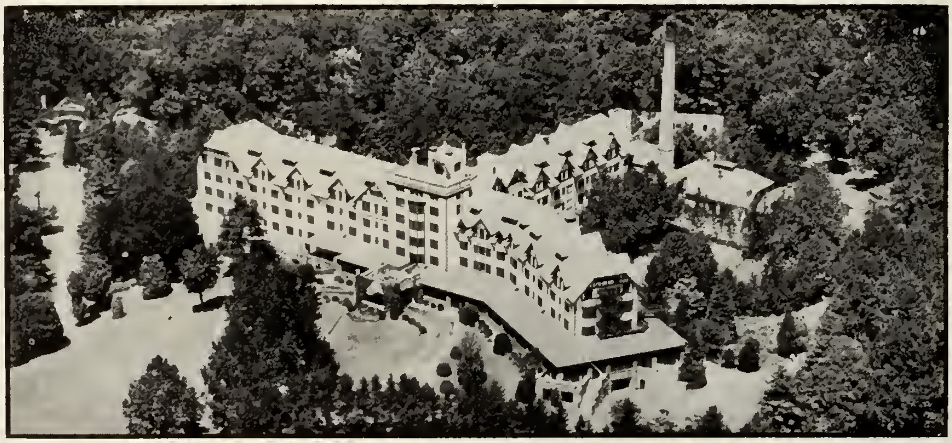

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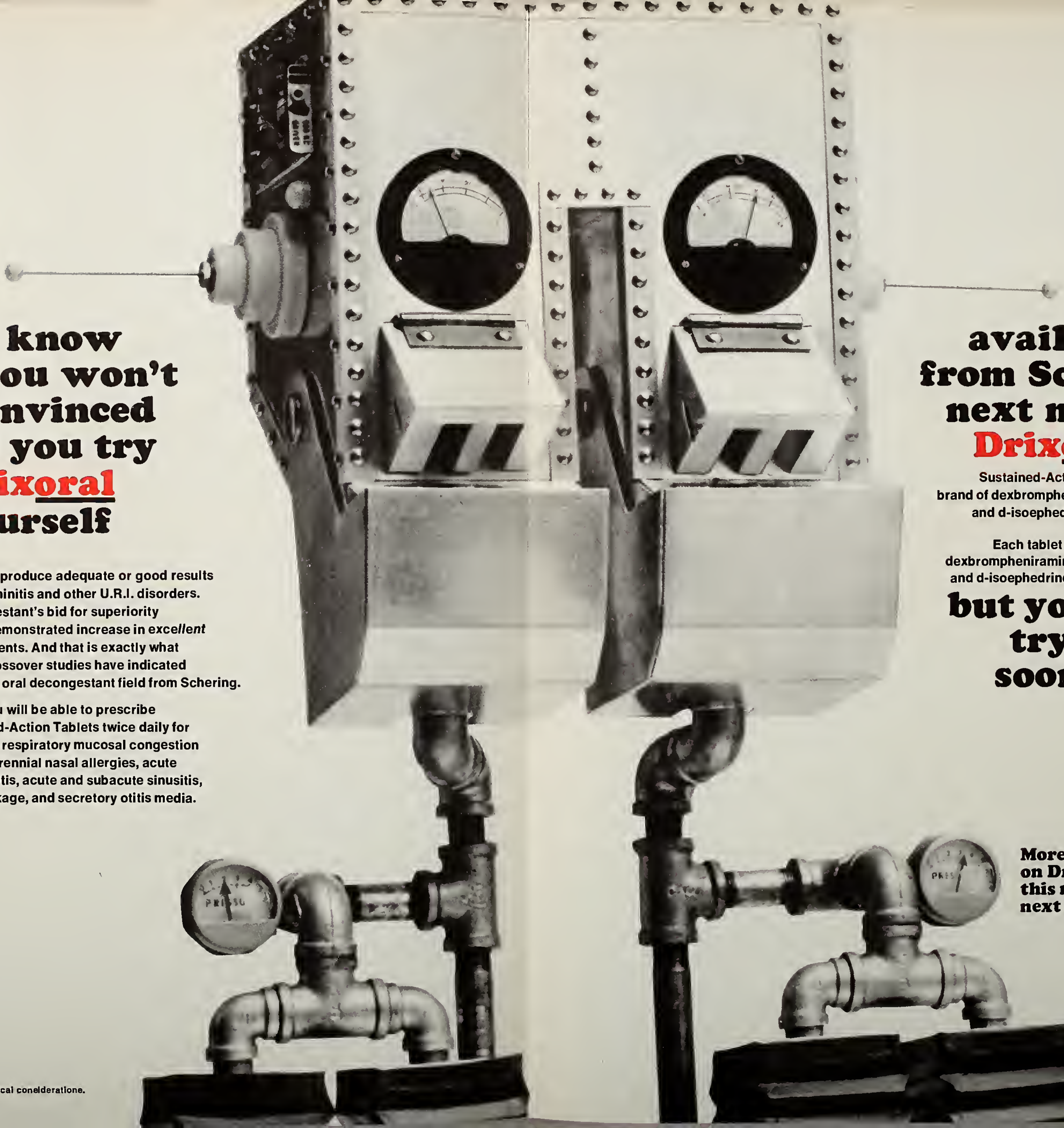
Next month, you will be able to prescribe DRIXORAL Sustained-Action Tablets twice daily for 24-hour relief of upper respiratory mucosal congestion in seasonal and perennial nasal allergies, acute rhinitis and rhinosinusitis, acute and subacute sinusitis, eustachian tube blockage, and secretory otitis media.



available from Schering next month Drixoral™

Sustained-Action Tablets
brand of dexbrompheniramine maleate
and d-isoephedrine sulfate

Each tablet contains
dexbrompheniramine maleate 6 mg.,
and d-isoephedrine sulfate 120 mg.

but you can try it sooner

More details on Drixoral and this mechanical man next month.

See last page of advertisement for clinical considerations.

Schering introduces Drixoral™

Double-blind and crossover studies[1-3] show superior results with an oral decongestant, but...

See last page of advertisement for clinical considerations.

see previous page for special pre-introductory sample offer for New Drixoral™

Sustained-Action Tablets
brand of dexbrompheniramine maleate
and d-isoephedrine sulfate

Each tablet contains dexbrompheniramine maleate 6 mg., and d-isoephedrine sulfate 120 mg.

Clinical considerations: Contraindications—DRIXORAL should not be given to children under 12 years of age. Until animal studies support the safety of this preparation for use during gestation, DRIXORAL should not be administered to pregnant women. *Precautions*—Although isoephedrine causes practically no pressor effect in normotensive individuals, it should be used with caution in patients with hypertension, coronary artery disease and hyperthyroidism. Dexbrompheniramine maleate may cause infrequent and usually mild drowsiness; should this occur, the patient should not engage in mechanical operations that require alertness. *Side effects*—Mild drowsiness has been observed in occasional patients receiving DRIXORAL. Although very infrequent complaints suggestive of sympathomimetic side effects have been noted, possible side effects of sympathomimetic origin include anxiety, tension, restlessness, nervousness, tremor, weakness, insomnia, headache, palpitation, tachycardia, angina, elevation of blood pressure, sweating, mydriasis, anorexia, nausea, vomiting, dizziness, constipation, and dysuria due to vesical sphincter spasm. For more complete details, consult package insert or Schering literature available from your Schering Representative or Medical Services Department, Union, New Jersey 07083.

References:
1. Pullan, F. W. 2nd, and Montgomery, W. W.: Arch. Otolaryng. 77:24, 1963.
2. Frank, D. I.: Curr. Therap. Res. 6:158, 1964.
3. Flarberg, A. A.: Ann. Allergy 22:324, 1964.

S-281

see previous page for special pre-introductory sample offer for New Drixoral™

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and d-isoephedrine sulfate

Each tablet contains dexbrompheniramine maleate 6 mg., and d-isoephedrine sulfate 120 mg.

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References:
1. Pullen, F. W. 2nd, and Montgomery, W. W.: Arch. Otolaryng. 77:24, 1963.
2. Frank, D. I.: Curr. Therap. Res. 6:158, 1964.
3. Fierberg, A. A.: Ann. Allergy 22:324, 1964.

S-281

There are 26,600* undetected diabetics in South Carolina

Most of these are probably among patients over 40; the overweight; relatives of diabetics, and mothers of large babies. By the time polyphagia, polyuria, polydipsia, pruritus or other overt symptoms of diabetes appear, damage may have been done that could have been minimized. DEXTROSTIX® gives you a reliable blood-glucose estimate in 60 seconds.

Why Wait?

*Based on Statistical Report, U.S. Dept. Commerce, ed. 86, and Fisher, G. F., and Vavra, H. M.: Pub. Health Rep. 80:961 (Nov.) 1965.

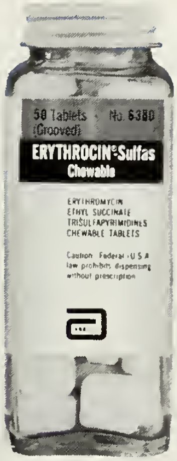
Note: DEXTROSTIX is not meant to replace the more precise analytical laboratory procedures such as needed in glucose tolerance testing.

AMES COMPANY, Division Miles Laboratories, Inc., Elkhart, Indiana 46514 428R67

Ames

Perhaps there have been times when you wanted to prescribe erythromycin and triple sulfas for little patients. Now you can—with a choice of two new fine-tasting pediatric forms.

New–Two Pediatric Forms of Erythromycin and Triple Sulfas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ERYTHROCIN®-Sulfas
Chewable
ERYTHROMYCIN ETHYL SUCCINATE TRISULFAPYRIMIDINES CHEWABLE TABLETS

ERYTHROCIN®-SULFAS Chewable

(Erythromycin ethyl succinate-trisulfapyrimidines chewable tablet)

In clinical trials[1,2], this orange-flavored tablet was given to 55 patients, aged four months to 18 years.

Diagnoses (multiple in some cases) represented a cross section of bacterial infections commonly seen in pediatric office practice.

Therapy was given from three to 12 days, with an average of six days.

Of the 55 patients, 30 were reported cured within 72 hours, while 22 showed partial recovery within the same time, and subsequent clinical cure.

A clinical cure rate of 94.5%

ERYTHROCIN®-SULFAS Granules

(Erythromycin ethyl succinate-trisulfapyrimidines granules for oral suspension)

87 patients were treated[1,2]—all children, ages four months to 15 years.

The diagnoses were multiple in some cases and were chiefly bacterial infections of the respiratory tract.

Dosage was maintained from three to 10 days; average treatment was five days. All of the ill children accepted the orange-flavored suspension favorably.

53 were clinically cured within 72 hours, while 32 showed partial relief within the same time, and subsequent clinical cure.

701358

A clinical cure rate of 97.7%

ABBOTT

Brief Summary on next page

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1. Case Reports on File, Dept. Clin. Development, Abbott Laboratories.
2. Polley, R.F.L., Use of Erythromycin-Sulfas in Office Practice, Western Med., 7:177, July, 1966.

ERYTHROCIN®-SULFAS
Brief Summary

Contraindications: Known sensitivity to erythromycin or sulfonamides. Because of the possibility of kernicterus with sulfonamides, do not use in pregnancy at term, premature or newborn infants.

Warnings: As with other forms of sulfonamide therapy, carefully evaluate patients with liver or kidney damage, urinary obstruction, or blood dyscrasia. Deaths have been reported from hypersensitivity reactions and blood dyscrasias following use of sulfonamides. Perform blood counts and liver and kidney function tests if used repeatedly at close intervals or for long periods.

Precautions, Side Effects: Occasionally mild abdominal discomfort, nausea or vomiting may occur with erythromycin, generally controlled by reduction of dosage. Mild allergic reactions (such as urticaria and other skin rashes) may occur. Serious allergic reactions have been extremely infrequent. Use sulfonamides with caution in patients with a history of allergy. Assure adequate fluid intake to prevent crystalluria and institute alkali therapy if indicated. If overgrowth of nonsusceptible organisms occurs, withdraw the drug and institute appropriate treatment. If a patient should show signs of hypersensitivity, appropriate countermeasures (e.g. epinephrine, steriods, etc.) should be administered and the drug withdrawn.

Adverse Reactions: Sulfonamide therapy may be associated with headache, nausea, vomiting, urticaria, diarrhea, hepatitis, pancreatitis, blood dyscrasias, neuropathy, drug fever, skin rash, injection of the conjunctiva and sclera, petechiae, purpura, hematuria and crystalluria.

Side effects due to erythromycin are infrequent, but occasional abdominal discomfort, nausea, or vomiting, urticaria and other skin rashes may occur.

Supplied: The Granules for Oral Suspension come in bottles of 60 ml. and 150 ml. The Chewable tablets are in bottles of 50. Each 5-ml. teaspoonful of reconstituted Granules or each Chewable tablet provides erythromycin ethyl succinate equivalent to 125 mg. of erythromycin activity and 167 mg. of each of sulfadiazine, sulfamerazine and sulfamethazine. 701358

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Tandearil®
oxyphenbutazone

Tandearil in Painful Shoulder

Therapeutic Effects: Stiffness and pain may diminish within 2 days, and full mobility may be restored within a week. These effects are obtained with oxyphenbutazone alone or combined with physiotherapy or local hormonal injections. The drug is usually well tolerated and does not affect pituitary-adrenal function or immune response.

Contraindications: Edema; danger of cardiac decompensation; history or symptoms of peptic ulcer; renal, hepatic or cardiac damage; history of drug allergy; history of blood dyscrasia. The drug should not be given when the patient is senile or when other potent drugs are given concurrently.

Warning: If coumarin-type anticoagulants are given simultaneously, watch for excessive increase in prothrombin time. Pyrazole compounds may potentiate the pharmacologic action of sulfonylurea, sulfonamide-type agents and insulin. Carefully observe patients receiving such therapy. Use with great caution in the first trimester of pregnancy.

Precautions: Obtain a detailed history and a complete physical and laboratory examination, including a blood count. The patient should be closely supervised and should be warned to report immediately fever, sore throat, or mouth lesions (symptoms of blood dyscrasia); sudden weight gain (water retention); skin reactions; black or tarry stools or other evidence of intestinal hemorrhage. Make regular blood counts. Discontinue the drug and institute countermeasures if the white count changes significantly, granulocytes decrease, or immature forms appear. Use greater care in the elderly and in hypertensives.

Adverse Reactions: The most common are nausea, edema and drug rash. The drug has been associated with peptic ulcer and may reactivate a latent peptic ulcer. Infrequently, agranulocytosis, or a generalized allergic reaction may occur and require withdrawal of medication. Stomatitis, salivary gland enlargement, vomiting, vertigo and languor may occur. Leukemia and leukemoid reactions have been reported but cannot definitely be attributed to the drug. Thrombocytopenic purpura and aplastic anemia may occur. Confusional states, agitation, headache, blurred vision, optic neuritis and transient hearing loss have been reported, as have hyperglycemia, hepatitis, jaundice, and several cases of anuria and hematuria. With long-term use, reversible thyroid hyperplasia may occur infrequently. Moderate lowering of the red cell count due to hemodilution may occur.

Dosage in Painful Shoulder: 600 mg. daily in divided doses for 2 to 3 days; 300 mg. daily thereafter. Usual duration of therapy: 2 to 7 days.

Availability: Tablets of 100 mg. 6562-VI(B)R

For complete details, please refer to full prescribing information.

Geigy

Geigy Pharmaceuticals
Division of Geigy Chemical Corporation
Ardsley, New York

Geigy

Tandearil®
oxyphenbutazone

helps painful shoulders move again

3 out of 4 painful shoulder patients responded well

84.2% of 127 patients

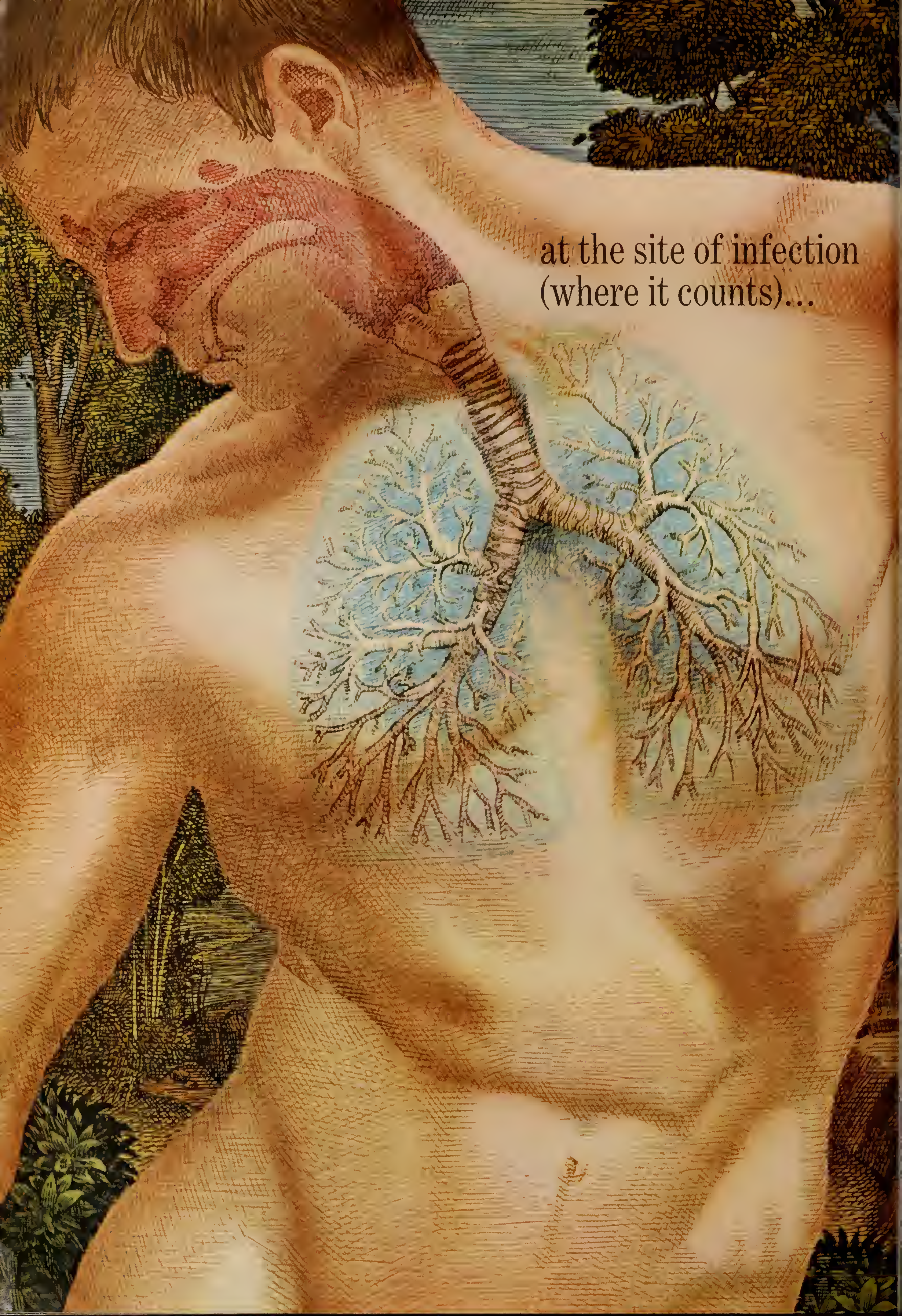
81% of 48 patients

Please see adjoining page for brief prescribing summary

TA-5094PC

Sperling, I.L.
Applied Therap. 6 117, 1964

Rosenbaum, E.E., and
Schwarz, G.R. Northwest Med. 61:927, 1962


at the site of infection
(where it counts)...

Ilosone® provides more antibacterial activity than any other oral erythromycin

Acid stable, better absorbed . . . Ilosone produces faster, higher, more prolonged blood levels, even in the presence of food[1-3]

Because it is the most active form of oral erythromycin, Ilosone can help assure consistently greater antibacterial activity at the site of infection. Ilosone produces peak antibacterial blood levels two to four times those of other erythromycin preparations.[1,2] Not only are these levels attained earlier, but they are maintained for much longer periods. Even the presence of food does not seem to affect the activity of Ilosone.[1,3]

In the treatment of patients with bacterial infections susceptible to erythromycin, Ilosone has compiled an excellent therapeutic record. Since it exerts its greatest activity against gram-positive organisms, it is particularly useful in common respiratory and soft-tissue bacterial infections. Ilosone kills—not merely inhibits—streptococci, pneumococci, and more strains of staphylococci than any other macrolide antibiotic. This bactericidal action, coupled with the high antibacterial levels attained, makes Ilosone especially valuable in patients with low host resistance, such as infants, debilitated individuals, and diabetics.

Ilosone has shown no cross-resistance with penicillin and may be effective against organisms that have become resistant to that agent. Despite its high antibacterial activity, Ilosone has demonstrated a low incidence of side reactions. Blood dyscrasias, ototoxicity, and tooth staining have not been observed. Infrequent cases of drug idiosyncrasy, manifested by a cholestatic jaundice, have occurred, but there have been no known definite residual effects.

Now available:
New! Ready-mixed Ilosone Liquid 125! (Contains erythromycin estolate equivalent to 125 mg. erythromycin base per 5-cc. teaspoonful.)

700970

Ilosone®
Erythromycin Estolate

Lilly

(See next page for prescribing information.)

Ilosone®/ the most active oral form of erythromycin

Description: Ilosone is the most active form of oral erythromycin that has been developed. Because it is stable in acid, well absorbed, and excreted in lesser amounts in the bile, it provides faster, higher, and longer-lasting levels of antibacterial activity (ABA) in the serum, even when taken with food, than do comparable doses of erythromycin.

Indications: Ilosone is indicated in infections caused by microorganisms sensitive to its action (especially staphylococci, hemolytic streptococci, and pneumococci). The drug is therefore useful in a high proportion of bacterial diseases encountered in clinical practice and particularly in the treatment of bacterial infections of the upper and lower respiratory tract and soft tissues.

In the treatment of acute bacterial pharyngitis and tonsillitis, this antibiotic has promptly eradicated the bacteria (streptococci) and has produced a parallel prompt clinical improvement. There have been no group A beta-hemolytic streptococci resistant to this preparation. In beta-hemolytic streptococcus infections, treatment should be maintained for ten days to prevent the development of rheumatic fever or glomerulonephritis.

Erythromycin estolate has proved to be very effective in pneumococcus pneumonia and in acute bronchitis with pneumococci on culture. Bronchopneumonia and otitis media in children have responded well to its use.

The antibiotic has been used very successfully in staphylococcus infections. Good therapeutic results have been obtained in soft-tissue infections, abscesses, cellulitis, carbuncles, wound infections, and furunculosis.

In serious staphylococcus infections, erythromycin preparations should be used only in combination therapy with other antimicrobial agents. As is the case with any treatment regimen used in these severe conditions, surgical procedures should be performed when indicated, and large dosages of the antimicrobial agents should be employed. In this fashion, Ilosone has been effective in staphylococcus pneumonia, osteomyelitis, septicemia, empyema, and meningitis.

Multiple 500-mg. doses of the drug have also been useful in gonorrhea and syphilis. Since penicillin is the drug of choice for the treatment of syphilis and gonorrhea, erythromycin estolate should be employed for these infections only in patients with a history of penicillin allergy. Also, other infections due to susceptible bacteria in patients known to be hypersensitive to penicillin or other antibiotics may be considered for treatment with Ilosone.

Contraindications: Ilosone is contraindicated in patients with a known history of sensitivity to this drug and in those with preexisting liver disease or dysfunction.

Adverse Reactions: Data obtained from seven years' use of propionyl erythromycin ester and erythromycin estolate (Ilosone) indicate that hepatic dysfunction with or without clinical jaundice may occur during or following courses of therapy with the drug.

Changes in liver function tests in such cases have been indicative of intrahepatic cholestasis. The symptoms appear to be the result of a form of sensitization. The initial symptoms have developed in some cases after a few days of treatment but generally have followed one or two weeks of continuous therapy or several courses of the drug. Symptoms reappear promptly, usually within forty-eight hours, if the drug is readministered to sensitive patients. Eosinophilia was noted in peripheral blood counts. The findings readily subsided without apparent residual effects when treatment was discontinued. Recovery was delayed in one reported instance. The physician indicated in this case that either drug-induced jaundice or viral hepatitis may have been responsible for the findings.

In one clinical study involving ninety-three patients treated with the antibiotic, three cases of jaundice were observed and an additional eleven cases developed some changes in liver function tests. Three of the patients had abnormal liver function tests a second time on readministration of the drug.

Even though it is assumed that not all cases of jaundice have been reported, it seems clear that the number is small compared with the amount of drug that has been used. Reported cases have included persons in whom there had been administered other drugs known to be associated at times with hepatic side-effects and cases in which the presence of viral hepatitis or other disease may have been responsible for the findings. In some of the cases, associated gastro-intestinal symptoms simulated the colic of biliary tract disease. In other instances, clinical symptoms and results of liver function tests resembled findings in extrahepatic obstructive jaundice. It appears that the occurrence of jaundice after administration of Ilosone is infrequent, but further investigations are being made to estimate its incidence more accurately.

In those cases mentioned above in which jaundice appeared t be definitely related to use of the drug, laboratory findings wer characterized by increased direct-reacting bilirubin, elevate alkaline phosphatase levels, negative or weakly positive cephali flocculation and thymol turbidity tests, elevated serum glutami oxalacetic transaminase levels, peripheral eosinophilia, and nor mal cholecystograms.

Individual idiosyncrasy seems evident since jaundice has no been reported in other patients taking prolonged courses of th medication. Patients with chronic infection have been given 1 t to 2 Gm. of the drug daily for periods of two to six months, an patients with rheumatic fever have taken prophylactic doses o 0.5 Gm. daily for two years without difficulty. In one group o 144 patients who received the drug daily for two years, no jaun dice was noted. It was of interest that members of six of thes patients' families, who were not taking the drug, had episode of jaundice during the study period.

Transaminase and serum alkaline phosphatase levels wer determined in a group of fifty-four adults and children who too 250 mg. of Ilosone daily for an average of sixteen months a rheumatic fever prophylaxis. The results were compared wit those of a similar group of forty-four patients who received pen icillin. There were no cases of jaundice in either group. Elevatio of SGPT and serum alkaline phosphatase levels during the cours of treatment was observed in one patient treated with Iloson and in two patients treated with penicillin. Seven other patient in the group receiving Ilosone and four others in the penicilli group showed elevations in one of the tests at some time durin administration of the drugs.

Very satisfactory therapeutic results, without toxicity, wer reported in 102 pediatric patients who received short-term (te day) courses of Ilosone in the treatment of streptococcus infe tions. Results of liver function tests in these patients wer comparable to those in a similar control group who had receive penicillin.

Gastro-intestinal disturbances not associated with hepatic e fects are observed in a small proportion of individuals as a resu of a local stimulating effect of the medication on the alimentar tract; however, the normal intestinal gram-negative bacteri flora is not appreciably altered by erythromycin drugs.

Although allergic manifestations are uncommon with the us of erythromycin, there have been occasional reports of urticari skin eruptions, and, on rare occasions, anaphylaxis.

Administration and Dosage: Ilosone is administered orally.

Ilosone Pulvules®, Ilosone Liquid 125, Ilosone, 125, for Or Suspension, Ilosone Drops, Ilosone Chewable Tablets.

For infants and for children under twenty-five pounds of bod weight, the usual dosage is 5 mg. per pound every six hours; f children twenty-five to fifty pounds, 125 mg. every six hour (Tablets Ilosone Chewable should be chewed or crushed an swallowed with water.)

For adults and for children over fifty pounds, the usual dosag of Ilosone is 250 mg. every six hours.

For severe infections, these dosages may be doubled.

When larger doses are indicated, parenteral erythromyci therapy should be considered.

In the treatment of syphilis, the recommended total dosage 20 to 30 Gm. given in divided doses for a period of ten to fiftee days. Close follow-up of the patient is necessary since erythr mycin drugs have not had adequate evaluation in all stages syphilis. Examinations of spinal fluid are recommended as pa of the follow-up therapy.

For gonorrhea, 500 mg. four times a day for four days a recommended. In the treatment of gonorrhea, patients with suspected lesion of syphilis should have a dark-field examinatio before receiving antibiotics, and monthly serologic tests shoul be made for a period of three months.

How Supplied: Pulvules Ilosone, Capsules, N.F., 125 and 250 m (equivalent to base), in bottles of 24 and 100.

Ilosone Liquid 125, Oral Suspension, U.S.P., 125 mg. (equivale to base) per 5-cc. teaspoonful, in 60-cc. and pint-size package

Ilosone, 125, for Oral Suspension, N.F., 125 mg. (equivale to base) per 5-cc. teaspoonful, in 60 and 150-cc.-size package

Ilosone Drops, 5 mg. (equivalent to base) per drop, in 10-cc.-si packages, with dropper calibrated at 25 and 50 mg.

Tablets Ilosone Chewable, N.F., 125 mg. (equivalent to base in bottles of 50. [03276

References: 1. Griffith, R. S., and Black, H. R.: Am. J. M. Sc., *247:*69, 196
2. Griffith, R. S., and Black, H. R.: Antibiotics & Chemother., *12:*398, 196
3. Hirsch, H. A., Pryles, C. V., and Finland, M.: Am. J. M. Sc., *239:*198, 1960.

Additional information available to physicians upon request.
Eli Lilly and Company, Indianapolis, Indiana 46206.

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HW&D BRAND OF LUTUTRIN

3000 UNIT TABLETS

IN THE TREATMENT OF FUNCTIONAL DYSMENORRHEA AND SELECTED CASES OF PREMATURE LABOR AND 2ND AND 3RD TRIMESTER THREATENED ABORTION

In controlling abnormal uterine activity, LUTREXIN, the non-steroid "uterine relaxing factor" has been found to be the drug of choice by many clinicians.

No side effects have been reported, even when massive doses (25 tablets per day) were administered.

Literature on indications and dosage available on request.

Supplied in bottles of twenty-five 3,000 unit tablets.

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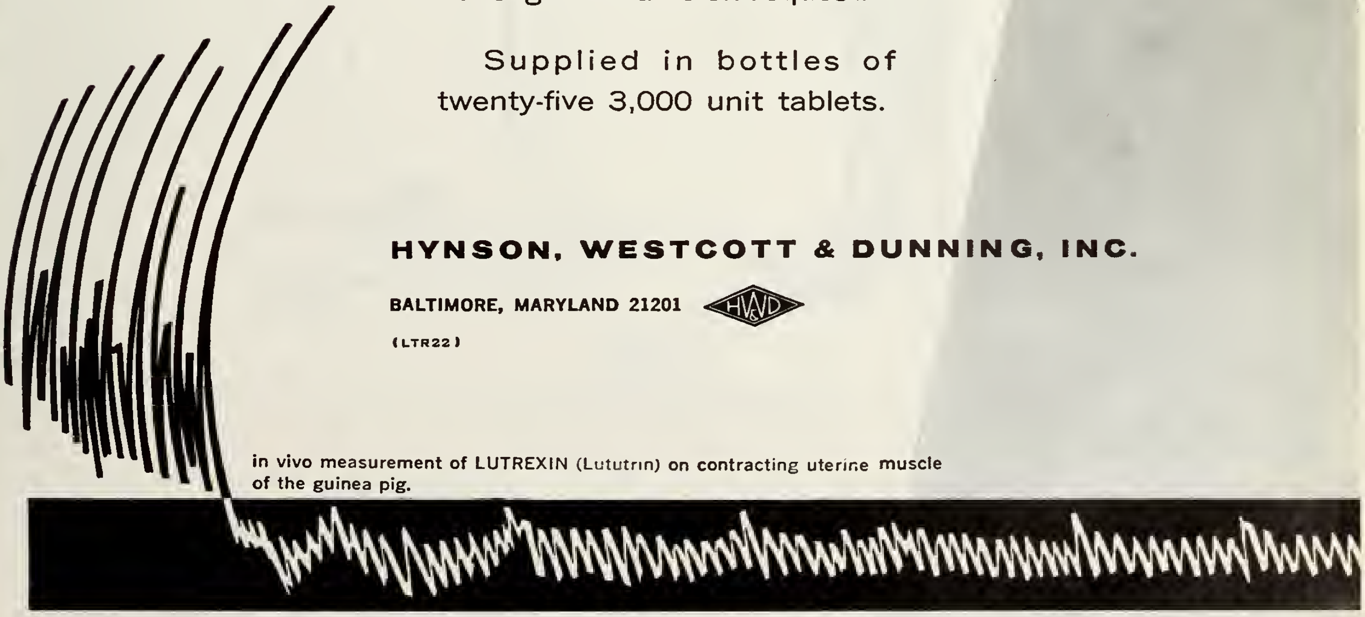
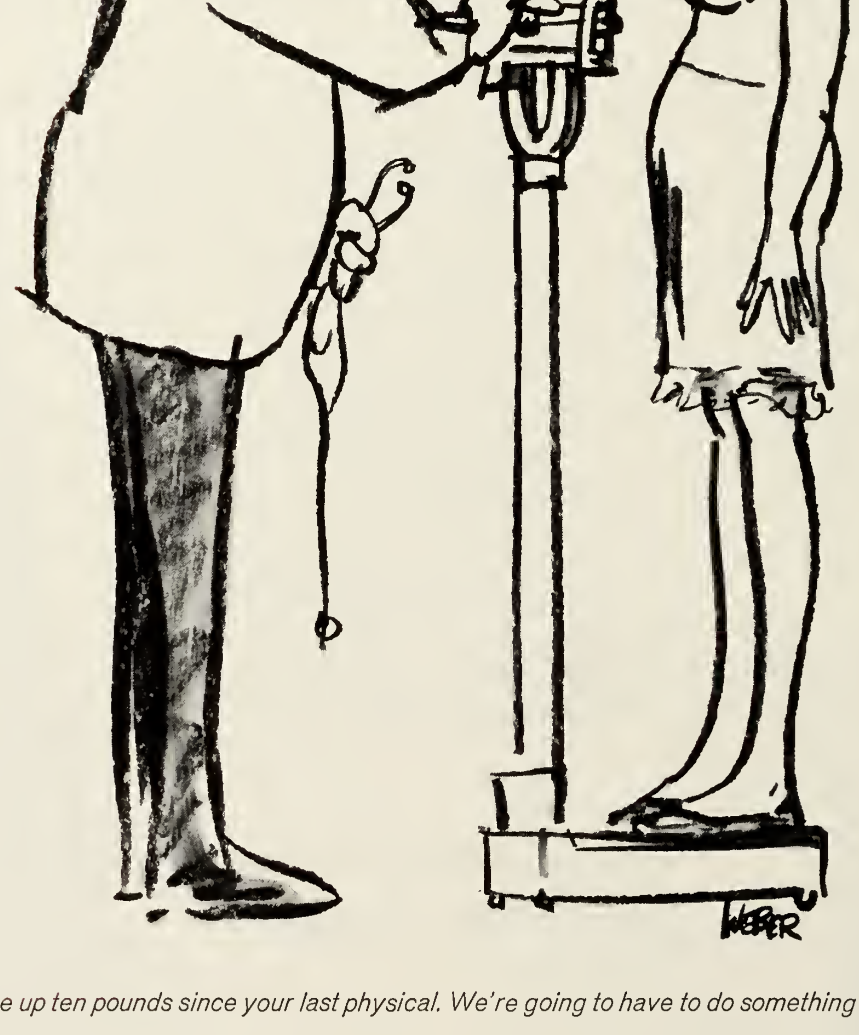


in vivo measurement of LUTREXIN (Lututrin) on contracting uterine muscle of the guinea pig.



"You're up ten pounds since your last physical. We're going to have to do something about that."

Get them while they're easily reversible.

Obesity doesn't happen suddenly. This insidious process has its beginning—and the chances of reversing it are better—during the *first 10 to 15 pounds of weight gain.* When a new dietary pattern must be established, consider the adjunctive use of BAMADEX SEQUELS. Combining the proven *anorexigenic* action of d-amphetamine with the *tranquilizing* effect of meprobamate, BAMADEX SEQUELS controls appetite throughout the day, usually with a single capsule daily.

Contraindications: Dextro-amphetamine sulfate: In hyperexcitability and in agitated prepsychotic states. Previous allergic or idiosyncratic reactions to meprobamate.

Precautions: Use with caution in patients hypersensitive to sympathomimetic compounds, who have coronary or cardiovascular disease, or are severely hypertensive.

Dextro-amphetamine sulfate: Excessive use by unstable individuals may result in psychological dependence.

Meprobamate: Careful supervision of dose and amounts prescribed is advised, especially for patients with known propensity for taking excessive quantities of drugs. Excessive and prolonged use in susceptible persons, e.g. alcoholics, former addicts, and other severe psychoneurotics, has been reported to result in dependence on the drug. Where excessive dosage has continued for weeks or months, reduce dosage gradually. Sudden withdrawal may precipitate recurrence of preexisting symptoms such as anxiety, anorexia, or insomnia; or withdrawal reactions such as vomiting, ataxia, tremors, muscle twitching and, rarely, epileptiform seizures. Should meprobamate cause drowsiness or visual disturbances, reduce dosage and avoid operation of motor vehicles, machinery or other activity requiring alertness. Effects of excessive alcohol consumption may be increased by meprobamate. Appropriate caution is recommended with patients prone to excessive drinking. In patients prone to both petit and grand mal epilepsy meprobamate may precipitate grand mal attacks. Prescribe cautiously and in small quantities to patients with suicidal tendencies.

Side Effects: Overstimulation of the central nervous system, jitteriness and insomnia or drowsiness. Dextro-amphetamine sulfate: Insomnia, excitability, and increased motor activity are common and ordinarily mild side effects. Confusion, anxiety, aggressiveness, increased libido, and hallucinations have also been observed, especially in mentally ill patients. Rebound fatigue and depression may follow central stimulation. Other effects may include dry mouth, anorexia, nausea, vomiting, diarrhea, and increased cardiovascular reactivity.

Meprobamate: Drowsiness may occur and can be associated with ataxia; the symptom can usually be controlled by decreasing the dose, or by concomitant administration of central stimulants. Allergic or idiosyncratic reactions: maculopapular rash, acute nonthrombocytopenic purpura with petechiae, ecchymoses, peripheral edema and fever, transient leukopenia. A case of fatal bullous dermatitis, following administration of meprobamate and prednisolone, has been reported. Hypersensitivity has produced fever, fainting spells, angioneurotic edema, bronchial spasms, hypotensive crises (1 fatal case), anuria, stomatitis, proctitis (1 case), anaphylaxis, agranulocytosis and thrombocytopenic purpura, and a fatal instance of aplastic anemia, but only when other drugs known to elicit these conditions were given concomitantly. Fast EEG activity, usually after excessive dosage. Impairment of visual accommodation. Massive overdosage may produce drowsiness, lethargy, stupor, ataxia, coma, shock, vasomotor and respiratory collapse.

Bamadex® Sequels®

Dextro-amphetamine sulfate (15 mg.)
with Meprobamate (300 mg.)

Sustained Release Capsules

Lederle

LEDERLE LABORATORIES
A Division of American Cyanamid Company
Pearl River, New York

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for
quick relief
that lasts
and lasts

Co-Pyronil®
Pyrrobutamine Compound

Additional information available to physicians upon request. ELI LILLY AND COMPANY, INDIANAPOLIS, INDIANA 46206.

Lilly

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The Journal
of the
South Carolina Medical Association

VOLUME 63 August, 1967 NUMBER 8

ARTICULAR MANIFESTATIONS OF INFECTIOUS HEPATITIS

THOMAS B. GUE'
WALTER M. BONNER, JR., M. D.

Polyarthritis is rarely recognized as being due to viral infection. This is surprising in view of the frequency of viral infections and the systemic nature of those infections.

In this paper, a case of polyarthritis associated with infectious hepatitis will be described. The frequency of this occurrence in patients hospitalized at the Medical College of South Carolina over an eleven year period will also be discussed.

Report of a Case

R.M., a 33 year old resident surgeon was admitted to the Medical College Hospital on September 2, 1966. He had been well until 11 days earlier when he noted stiffness and pain in the wrists and fingers. Within 24 hours the feet, knees, shoulders and temporo-mandibular joints were similarly involved, and on the fourth day swelling and redness appeared over the metatarsophalangeal (MTP) joints, the metacarpophalangeal (MCP) joints and the proximal interphalangeal (PIP) joints of the fingers. Morning stiffness was severe and lasted one or two hours. Self-treatment with salicylates gave some relief of pain. He had no fever, anorexia, abdominal pain, cough, diarrhea, urethral discharge or any other symptoms.

Examination, nine days after onset of the symptoms, revealed a young male who appeared healthy but who moved about slowly due to joint pain. Temperature 98.4° F. There was pain on motion of the shoulders and tenderness over the shoulder joints. There was mild swelling, erythema and tenderness over the metacarpophalangeal joints and the PIP joints of the second and third fingers bilaterally. The right heel was tender and the metatarsophalangeal joints were painful on compression. No subcutaneous nodules were detected and there was no synovial hypertrophy. The rest of the examination revealed no abnormalities.

The erythrocyte sedimentation rate was elevated at 38 mm/hr (Wintrobe). The urinalysis, the hemogram, the antistreptolysin-o titer and the uric acid were normal and a throat culture grew out non-pathogenic organisms. An LE cell test was negative and the latex fixation test for rheumatoid factor was negative.

He was thought to have early rheumatoid arthritis and was treated with bed rest and 3.6 grams of aspirin daily. During the next day he experienced nausea, anorexia and abdominal discomfort, and the joint pains became more intense. On the twelfth day of the illness he was noted to be icteric.

Hospital Course. Examination: Temperature 98° F. The liver edge was palpable at the right costal margin and was slightly tender. The spleen was not palpable. There was moderate tenderness over the MCP joints of the second and third fingers and mild tenderness of the MTP joints. There was pain on motion of the hips and shoulders, but no other signs of joint disease were present.

Laboratory Studies: Hemoglobin 17.8 Gm/100 ml. WBC 5,954 per mm^3 with 53% neutrophiles, 40% lymphocytes, 4% eosinophiles and 3% basophiles.

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The urinalysis was normal except for a 3+ test for bilirubin. The serum glutamic oxalacetic transaminase (SGOT) was 1150 units and the cephalin-cholesterol flocculation test was strongly positive. The alkaline phosphatase was 29.7 K-A units. The total bilirubin was 13.0 mg with the direct-reacting fraction 9.8 mg. The heterophile antibody titer was 1:28 and agglutination tests for leptospiral antibodies were negative. X-ray films of the chest and abdomen were normal.

He remained afebrile and, although the icterus grew more intense for several days, his appetite and general sense of well-being improved rapidly. The articular signs disappeared in three days while some discomfort in the shoulders and fingers persisted for seven days. He was free of joint pain and stiffness when discharged to home after 14 days. On September 12, 1966 the SGOT was 215 units, the bilirubin 6.3 mg and the alkaline phosphatase was 17.8 K-A units.

Six weeks later the sedimentation rate (ESR) was 17 mm per hour, the SGOT was 30 units and the bilirubin 0.6 mg. He then was permitted to resume his usual activities, and has tolerated these well.

Comment

This young man was thought to have rheumatoid arthritis when he developed polyarthritis, marked morning stiffness and elevation of the erythrocyte sedimentation rate. On the twelfth day of the illness he became icteric, and the laboratory data and subsequent clinical course indicated that he had infectious hepatitis. The rapid clearance of the arthritis and the eventual return of the ESR to normal indicated that the polyarthritis was a feature of that viral infection, and led to a review of the hospital records of patients with viral hepatitis.

Survey of Hospital Records

The records of all in-patients with infectious hepatitis (I.H.), admitted to the Medical College Hospital from 1955 through 1966, were reviewed. Fifteen children less than six years of age were excluded from consideration since it is unlikely that they could have given an adequate history. One adult was excluded because of a previous history of rheumatoid arthritis. There remained 140 patients with I.H., and the occurrence of arthralgia or frank arthritis in these were noted. During the same period there were 29 patients with serum hepatitis (S.H.) and their records were also reviewed. The data concerning the age, race and mortality of the constituents of these groups is summarized in Table I. The incidence of arthritis is listed therein.

TABLE I

Age, Sex and Mortality of Patients
With Infectious Hepatitis and Serum Hepatitis

	Infectious Hepatitis	With Arthritis	Serum Hepatitis	With Arthritis
Total	140	20 (14%)	29	1 (3%)
Males	79	12 (15%)	13	0
Females	61	8 (13%)	19	1 (5%)
Negro	73	9 (12%)	9	0
White	67	11 (16%)	20	1 (5%)
Deaths	3	1 (33%)	2	0
Age by Decade				
6-9	8	0	1	0
10-19	37	0	6	0
20-29	41	10 (24%)	2	1 (50%)
30-39	21	3 (14%)	2	0
40-49	14	3 (21%)	6	0
50-59	8	2 (25%)	7	0
60-69	8	2 (25%)	4	0
70-79	3	0	1	0

Of the I.H. group, 20 patients had joint manifestations during the preicteric or icteric phases of the disease. None of the patients with joint symptoms was less than 20 years of age but the incidence was about equal in the older age groups. There was no predilection for either sex or race. In most cases the rheumatic symptoms began 14 days or less prior to the onset of icterus, while two patients had arthralgia for three weeks before icterus was noted and one patient had recurrent arthralgias for three months before she became jaundiced. Large and small peripheral joints were affected but there was no instance of spondylitis. Arthralgias were the initial manifestation in three cases, more frequently being accompanied by malaise, anorexia, fever, myalgias and abdominal pain. None of the patients had skin eruptions, purpura or urticaria. Severe morning stiffness occurred in 5 patients. In two cases the articular symptoms subsided prior to the onset of the icterus and the others improved rapidly after the jaundice appeared. One patient had recurrent arthralgias after four weeks, preceding a recurrence of the icterus.

There was no indication that I. H. accompanied by arthritis is a more severe disease than usual. Three patients died, and one of these had arthralgias prior to onset of the icterus.

Only one patient with S.H. had arthralgia. She was a 24 year old white female who had a hysterectomy two months before the onset of icterus, and had 1000 ml of whole blood transfused on the day of the operation. Arthralgias occurred during the two weeks prior to appearance of the jaundice.

Discussion

The data indicate that polyarthritis or arthralgias are common manifestations of infectious hepatitis.

That this is so is well-established by previous observations, but is not well-known. Graves,[1] in 1884, and Astros[2] in 1886 reported cases of arthralgia and arthritis associated with jaundice. More recently, several large series of arthritis associated with I.H. have been reported. Marner[3] indicated that 12% of 485 patients had joint symptoms during the pre-icteric phase of hepatitis and that half of these had objective signs of inflammation of the joints.

Klemola and Torma[4] described joint symptoms in 31% of 150 cases of hepatitis which occurred in Helsinki between July 1948 and May 1949. They thought that the high incidence of joint manifestations might have been a peculiarity of that particular epidemic. Seven patients were said to have originally consulted their physicians because of arthritis.

The clinical picture described in these series, and in other case reports, is quite identical to that in our own patients. However, Blanco-Morales[5] and Lejeune *et al*[6] described urticarial or purpuric eruptions occurring at the time joint pains began in some of their patients.

It seems likely that the articular manifestations of I.H. are due to direct invasion of the synovial tissues by the virus. The synovitis usually conicides with systemic signs of infection (fever, chills, malaise) and it is known that viremia occurs 7-21 days before icterus appears.[7] One of our patients had recurrent arthralgias for three months. She might actually be a case of S.H. since this disease has an incubation period of up to six months. Lichtman[8] has indicated that joint pains may occur in the preicteric phase of S.H.

Taniguchi and Schichikana[9] have demonstrated the production of acute synovitis by intra-articular injection of several viruses (vaccinia, ectromelia, Coxsackie and Rift Valley fever) in rabbits.

This study re-emphasizes the frequency with which a self-limited arthritis occurs during the course of viral hepatitis. Viral arthritis should be considered in the differential diagnosis of polyarthritis of recent onset.

Summary and Conclusions

Arthralgia or arthritis occurred in 20 (14%) of 140 patients with infectious hepatitis but in only one of 29 patients with serum hepatitis.

The symptoms usually begin during the pre-icteric phase of I.H. and subside rapidly after jaundice appears. Large and small joints are involved and stiffness is a prominent symptom.

The articular manifestations are probably due to invasion of the synovial membranes by the virus.

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RARER FORMS OF LEUKEMIA

MANAGEMENT OF PROMYELOCYTIC, ALEUKEMIC AND EOSINOPHILIC LEUKEMIAS

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Chemotherapeutic management of three of the rarer forms of leukemia, namely, promyelocytic, aleukemic and eosinophilic leukemias, is covered in this review of 47 clinical reports from the current world literature, 1959-1966. Promyelocytic leukemia is much more resistant to chemotherapeutic control than are the common lymphocytic and granulocytic leukemias. Corticosteroids, used alone or in combination with other drugs, dominate the clinical trials to induce remissions in patients with this rarer form of leukemia: of the 52 patients in this study whose treatment presents enough data to calculate remission rates, 41 were given steroids for a remission of only 34%. Other antileukemic drugs employed with steroids included 6-mercaptopurine, methotrexate and antibiotics.

A number of miscellaneous antileukemic drugs without steroids were used in the control of promyelocytic leukemia, including methylglyoxal-bis-(guanylhydrazine), vincristine and a crystalized fraction of the spleen (Industin A). When all 52 patients were included in the calculation of remission rates, the 36% achieved ran far below the percentages noted in the common forms of leukemia. And a score of reports described the treatment of only single cases.

The results in the control of aleukemic leukemia are much more encouraging. Steroids again are the most frequently employed drugs, for of the 31 cases with sufficient clinical data to determine the results, 23 showed a remission rate of 83% after receiving steroids alone or in combination with other drugs. The report of Pawelski and associates (*Pol. Tyg. Lek. 16*, 1279-84, 1961) on inducing 12 remissions for periods ranging from four to 24 months in 14 patients with aleukemic chronic lymphocytic leukemia who were given prednisone, and the inducing of remissions in five of six patients with aleukemic leukemia with a combination of steroids and 6-mercaptopurine (Komiya and Ito, *Rinsho Ketsueki 1*, 443-53, 1960) are outstanding results achieved in this form of leukemia. The use of single drug therapy dominates the control of aleukemic leukemia, in contrast to the combination chemotherapy in the induction of remissions in promyelocytic and eosinophilic leukemias. Other drugs administered in cases of aleukemic leukemia included antibiotics, dexamethasone and P^{32}.

Of the 14 clinical reports dealing with the treatment of eosinophilic leukemia, 12 describe the use of steroids alone or in combination chemotherapy. The rate of remission for 17 patients given steroid therapy was only 46%, while for 19 cases using all drugs, the rate was 52%. Drugs included in the control of eosinophilic leukemia included steroids, 6-mercaptopurine, Myleran, antibiotics, folic acid antagonists and nitrogen mustards.

The data on the three types of rare leukemias in this study are too limited for statistical study. Thirty-nine of the 47 references are to clinical reports published outside the United States.

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A list of 47 references may be secured from the writer.

THE THORACIC AORTA

Part III. Dissecting Aneurysms

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A dissecting aneurysm of the aorta is a specific entity which nearly always is initiated by a tear in the intima with subsequent intramedial dissection by the forceful stream of blood. If untreated, the ultimate result is usually death.

Etiology: The cause of aortic dissections is poorly understood. Most patients with this disorder have hypertension (56 of 68 patients reported by Hume and Porter[6]) and there is, for reasons not yet known, a loss of integrity of the media. In pathologic studies by Hume and Porter[6] of specimens removed in 57 patients either treated or observed, it was noted that 53 had cystic medial necrosis, though in other series this particular medial change is not as frequently recognized. Another group, separate from the majority with cystic medial necrosis, includes those who have Marfan's syndrome, in whom the aortic change is predominant and in whom there is a predisposition for aortic dissection. Other instances of dissection may not belong to the group with medial degeneration. For example many arteriosclerotic aneurysms after rupture, may have extravasation of blood within their wall for a short distance. These are usually localized and are not associated with the widespread involvement that occurs with a true dissection. The ease with which the walls of the vessels can be separated by a forceful stream of blood is demonstrated by the recent reports of acquired aortic dissections that are associated with extracorporeal perfusion. These are frequently precipitated by cannulation of the peripheral vessels, but once instituted will behave exactly as a spontaneously occurring disorder. This accident lends some credence to the theory that perhaps the disorder is primarily intimal and that once the blood gains access to the media, the dissection may take place in normal vessels.

Pathology: The intimal disruption in aortic dissections occurs most frequently in the ascending aorta, approximately 60% in most reported series. (Table 1). Most of the remainder are in the first part of the descending aorta just distal to the take-off of the left subclavian artery. Some have been reported as originating within the arch between the innominate and the left subclavian, though this is uncommon.

The false lumen in the dissected portion of the aorta may not always be filled with liquid blood, and this points to the danger of postoperative emboli after a fenestration procedure.

Table 1
Location of Intimal Tear
(Series of Hume and Porter)

Location	*No.*	*%*
Just distal to aortic valve	29	57
Distal ascending aorta	3	5.8
Arch	3	5.8
At or just distal to left subclavian artery	11	21.5
Mid or low descending aorta	3	5.9
Diaphragm	1	2.0
Abdominal aorta	1	2.0
No tear	1	1.9

The presence of an inordinately severe mediastinal and pleural reaction is a striking finding at operation, explaining the pleural effusion frequently seen. The ascending aorta differs from the descending portion in that the media is less thick and adventitia less well developed. Aneurysms that develop in the ascending aorta tend to rupture into the pericardial sac with a high degree of frequency and may cause fatal tamponade. This may be gradual from "weeping" of blood through the adventitia. Others in the ascending aorta area may dissect proximally down to the annulus of the aortic valve, and cause stretching of the annulus and distortion of the attachment of the aortic valve resulting in valvular incompetency. Some extend out along the coronary arteries and cause constriction of these vessels with fatal outcome. Others in this area may descend across the transverse aorta and down into the distal aorta and behave exactly as aneurysms do that originate in the region of the left subclavian. Tears that originate in the region of the left subclavian vessel occasionally extend proximally but most frequently do so distally. The extent of the dissection varies from patient to patient; therefore, the symptoms and signs are widely different.

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The serpiginous course down the aorta is an unusual feature of the disorder, which explains the spotty nature of the vascular occlusion. The basic process, however, is an encroachment on the lumen of the vessel by the dissection to the point that eventually it becomes completely or partially occluded. Therefore, the patient may present signs of renal shutdown, paraplegia, carotid insufficiency, mesenteric thrombosis, or extremity gangrene. The rapidity of the onset and progression of fatal complications varies widely from patient to patient. The dissection may be an acute form, with perforation exsanguination, cardiac tamponade, or with occlusion of a vital artery which occurs rapidly and results in death in a few hours or days. A more gradual type, subacute, occurs where there is progression and periods of remission which may extend over a period of days or even weeks. There is a third termination, the chronic form, characterized by, for reasons not known, a remission of the dissection of a re-entry into the true lumen at some distance away from the origin. When the latter occurs it is thought that the progression ceases.

The mortality after the occurrence of dissection has been noted by Hirst[5] to be 3% immediately after onset, 21% in 24 hours, 60% in two weeks, and 90%+ in three months.

Diagnosis: The clinical picture is usually striking, with severe pain in the upper chest and upper back which may radiate down one or all extremities, around the anterior chest, or into the abdomen, sometimes associated with transient neurological deficit in the lower half of the body, and often associated with shock. The pain may be unremitting, although the patient's vasomotor system may stabilize. This has to be differentiated from other conditions that cause pain in the upper thoracic spine and anterior chest such as coronary artery disease, pulmonary embolus, pericarditis, and pleuritis from varying causes, as well as such catastrophes as ruptured esophagus, pancreatitis, or mesenteric thrombosis.

Physical examination occasionally shows an absence of pulsation in one or more extremities, or a neurological deficit in the lower extremities. When the urinary output is monitored, it may be decreased or absent. There may also be evidence of cardiac tamponade. An ECG may be helpful in excluding an infarct or demonstrating pericarditis.

In such an extremely ill patient diagnostic procedures are carried out with difficulty; though it is important to make every effort to determine the origin of the tear as definitive treatment depends upon localization.

Plain x-ray examination of the chest may show the distorted ascending, transverse, or descending aorta, and can be useful if there are former plain films available for comparison. In an anterior-posterior projection in a patient with pain, however, the diaphragm may be high, adding to the difficulty in interpretation. The patients with symptoms for some hours, often have a pleural effusion and marked mediastinal reaction to the dissection. The cardiac silhouette should be inspected carefully for a pericardial effusion, which may indicate proximal dissection and impending tamponade. A pericardial tap is useful for confirmation.

Because of the variability of the sites of intimal tear and the extents of circumferential and longitudinal dissections, a prime requisite of operative management is an accurate diagnosis demonstrating if possible the origin of the dissection. Venous angiocardiograms frequently show a double density and sometimes a filling defect in the true lumen. The extent of the involvement of the thoracic aorta can be determined in many patients, though it usually will not indicate the exact point of origin of the dissection. The confinement to the descending aorta is evidence, in most, of origin at the left subclavian artery. When more precise delineation is necessary, retrograde catheterization of the aorta can be performed, though there is a tendency for the retrograde catheter to enter the false channel and with the hazard of perforating the external wall. A retrograde brachial aortogram without a catheter using a pressure injector will help to show a filling defect in the aortic lumen, in order to confirm the diagnosis. Even with most of the maneuvers outlined the diagnosis still may be difficult, and the symptoms and ordinary physical signs frequently are the most important factors in arriving at the diagnosis.

The Clinical Classification

DeBakey and his group[4] have classified dissecting aneurysms as follows. This serves as a useful clinical guide and is listed below:

Type 1. *Complete Aortic.* The dissection begins in the ascending aorta and may extend distally to involve even the entire aorta and many of its branches. For this type, if cardiac tamponade is present, then anterior mediastinal exploration, ascending aortic resection, and replacement with an aortic graft is necessary. The patient should then be turned on the left side and a fenestration procedure done in the low thoracic aorta.

Type 2. *Ascending Aortic.* The dissection originates in the ascending aorta, involves only this portion, and frequently dissects proximally to unhinge the aortic valve, causing aortic insufficiency. If acute, and there is cardiac tamponade present, then immediate operation is indicated with replacement of the first part of the ascending aorta with an aortic graft. If the patient is in either the subacute or chronic phase, with aortic insufficiency from the dissection, then again resection and replacement of the ascending aorta with aortic graft, and perhaps re-attachment of the valve, if in the early stage is indicated. If in the late stage, replacement of the valve with a prosthetic valve may be required. If Marfan's syndrome is associated with this combination, then resection, replacement with a graft and probably replacement with a prosthetic valve will be necessary. Uncommonly, in chronic forms, the ascending aorta is not distorted and its wall is not compromised. In such cases a direct repair can be done by transecting the double wall of the proximal aorta, suturing the layers of the inner and outer layers together proximally and distally and then approximating the sutured ends of the aorta together by an end-to-end anastomosis.

Type 3. *Descending Aortic.* The dissection begins in the first part of the descending aorta a few millimeters below the left subclavian artery. This rarely extends proximally, but usually extends distally for varying distances throughout the aorta and its branches. Usually the tear can be identified and resected with a segment of the descending aorta. The walls of the distal aorta are sutured together and a graft is used to replace the resected segment.

Treatment

Expectant management of this almost uniformly fatal disorder has little to offer. On the other hand Wheat and associates[11] have recently reported palliation which changes in status from the acute to the chronic stage. By this delay the extent of the dissection was localized and more precise operative management was then possible. This is done by a combination of drugs that reduce the force of left ventricular impulse, decrease the catecholamine stores, and diminish the blood pressure. The drugs recommended are trimethephan by intravenous drip infusion for control of pressure in the early state, and guanethidine and reserpine for control of the chronic stage.

Operative treatment of dissecting aneurysms requires occlusion of the thoracic aorta by cross clamping at various levels and requires either partial or complete cardiopulmonary bypass.

Partial bypass is now considered preferable to hypothermia alone, since it gives the surgeon a longer time to work safely, protects the left ventricle from over-distention, and reduces the chance of proximal dissection when the tear is at the left subclavian artery. It is used for fenestration procedures in the descending aorta and for resections of the descending aorta. The outflow catheter is placed in the femoral vein and the inflow catheter is placed in the femoral artery. Great care must be taken when the cannula is inserted into the femoral artery to assure its position in the true lumen of the vessel when the dissection has extended to this level. The blood is passed through an oxygenator (usually a bubble oxygenator) and heat exchanger and reinfused through the femoral artery. The lungs and heart continue their function and furnish oxygenated blood to the heart and brain. In the Duke University experience a flow rate of approximately 2000 ml/minute is usually required to maintain blood pressure, which is monitored in the brachial artery, in a normal range in the upper extremity as well as to assure adequate perfusion of the vessels supplying the spinal cord and kidneys. In the Duke Clinic this is used in preference to the left atrial-femoral artery bypass because (1) equipment is available, (2) the pericardium and atrium are not disturbed, (3) flow and blood pressure are easier to attain.

High flow complete cardiopulmonary bypass with moderate hypothermia (30-33° C) and coronary perfusion is utilized when resection of the ascending arch with or without valve repair is necessary. The coronary arteries are perfused with oxygenated blood cooled to 10-15° C at rates of 200-300 ml/minute with the pressure regulated to 150 mm Hg or less. Saline slush or a cooling jacket is positioned around the heart also.

Re-entry window or fenestration procedure.

In 1955 DeBakey, Cooley, and Creech[3] described the creation of a re-entry window with obliteration of the false passage below to re-direct the blood flowing through the intramural layers of the aorta into the lumen. This procedure was used when the dissection began either in the ascending or descending aorta. It is no longer the procedure of choice.

The approach to the descending aorta is made through a left posterolateral incision with resection of the sixth or seventh rib. At this level, the procedure is facilitated by having greater length and more substantial aorta to work with. A short segment of the aorta is mobilized with great care to conserve as many patent intercostal branches as possible. The patient is placed on partial cardiopulmonary bypass with moderate hypothermia. Occluding clamps are placed across the aorta and it is partially or completely divided depending upon the extent of circumferential dissection. A triangular segment of the dissected media and intima above is excised so as to create a re-entry passage in the proximal segment. The layers of the distal segment are sutured together. The clots in the false lumen of the proximal segment are removed as well as is possible. The two segments of the aorta are then anastomosed.

There are several disadvantages to the fenestration operation. These are discussed in detail by Debakey *et al*[1] and by Bosher, Brooks, and Pois.[2] Emboli may arise from the area of dissection in the proximal aorta and occlude the vessels supplying the abdominal viscera or lower extremities. A segment of the proximal aorta is left in place which may be badly compromised by the hematoma in its wall. Due to the increase in pressure in clamping the dissection may continue and progress proximally.

On the other hand, the procedure has proven moderately successful for 18 patients with acute and subacute dissections at Duke University Medical Center.[7] The dissection began in the ascending aorta in five patients and in the arch in four others. In the nine remaining patients, the exact point of origin was not determined but in each, either the arch or ascending aorta was involved as shown by preoperative roentgenograms or inspection during thoracotomy. The dissection continued to at least the diaphragm in 14 of 16 patients in whom this information was available. Eleven of these patients survived the procedure and were discharged from the hospital, giving a hospital survival rate of 61%. Hume and Porter[6] reported that six of eight patients having fenestrations for acute dissection survived. Although this procedure is palliative, it still is of value in the treatment of patients with acute dissecting aneurysms. The relief of pain afterwards is dramatic.

Resection of descending aorta including entry and insertion prosthesis.

When the dissection begins in the descending aorta, and the most common site is just distal to the left subclavian artery, excision of the area of origin with the involved descending aorta and replacement with a plastic prosthesis is the procedure of choice.[1, 2, 4, 6, 10] A left posterolateral incision with resection of the fourth rib will give good exposure to this area. The first portion of the descending thoracic aorta is mobilized by division of the ligamentum arteriosum and the upper intercostal arteries. The left subclavian artery is mobilized and tapes are passed around it and the upper and lower descending aorta. Partial cardiopulmonary bypass with hypothermia is instituted. The aorta just proximal to the left subclavian artery and the left subclavian artery is cross clamped. Another occluding clamp is placed across the aorta at a site selected for the lower end of the resection. It is not imperative to resect a long segment of the aorta, as the dissection usually continues below the diaphragm, and this may be hazardous because of the compromise to the spinal cord by sacrifice of an undue number of intercostal vessels. The area of tear with a segment of the aorta usually corresponding to not more than the first three pairs of intercostal vessels is resected. When the dissection continues distally, the separated layers of the distal segment are sutured together prior to inserting a graft. A woven Teflon graft is used to replace the resected aortic segment, as there is less loss of blood through the interstices when the patient is heparinized than occurs with the knitted prostheses. The proximal and distal anastomoses are made with a continuous 3-0 or 4-0 over-and-over suture. Teflon felt strips may be used to buttress the sutures on the anterior aortic wall when it is friable. Additional interrupted sutures are used where necessary to reenforce the suture line.

Direct Repair of Ascending Aorta.

There has been a growing enthusiasm for direct definitive repair of those dissections that begin in the ascending aorta.[1, 2, 4, 6, 8, 9] This may be done in the acute phase though most of the reported successful cases have been done during the chronic phase. These proximal dissections may be associated with aortic valve insufficiency. The extent may be confined to the ascending aorta, though in some the dissection occurs through the thoracic and into the abdominal aorta. This latter situation is more complicated and may require the two procedures of resection of the ascending aorta and a distal fenestration procedure. In the acute phase, it is mandatory to resect the ascending aorta and replace it with a prosthesis, whereas in the chronic form transection of the aorta at the site of tear and obliteration of the false lumen might be applicable provided there is minimal anatomical disruption and distortion at the site of the initial laceration.

a. Repair without resection.

Approach to the ascending aorta is through a median sternotomy incision. Before dissection of the aorta is done, the patient is made ready for cardiopulmonary bypass with hypothermia in the event that perforation of the aorta occurs during its manipulation. If it not necessary to resect the ascending aorta, the distal ascending aorta is clamped and the aorta transected a few centimeters above the aortic valve. The coronary perfusion is begun and saline slush is placed around the heart. The inner and outer layers of the dissected aorta in the proximal and distal segments are sutured together by an over-and-over continuous suture. An end-to-end anastomosis reunites the two ends of the aorta. Aortic insufficiency, should it exist, is often corrected by resuturing the intima to the aortic wall just distal to the annulus.

b. Excision of the ascending aorta and replacement with a prosthesis.

In the acute phase, resection and replacement of the ascending aorta should be strongly considered when the ascending aorta is distorted and severely disrupted even though the dissection continues beyond the ascending aorta. This is the situation when the process is acute; and as a rule repair of the aorta can rarely if ever be accomplished. Approach is made through a median sternotomy incision and the patient is placed on cardiopulmonary bypass with hypothermia before much dissection is done. The aorta is doubly clamped just proximal to the innominate artery and the aorta transected at this level. In this operation it may be possible to allow the heart to perfuse the coronaries by clamping the proximal aorta and permitting the heart beat to continue, and, insuring pulmonary ventilation, the coronary sinus return, augmented by the bronchial arterial flow to the left atrium, may be ample for the non-working heart's need. An alternative is to insert a small catheter into the proximal aorta, or through the graft if it is elected to do the proximal anastomosis first, for perfusion of the coronary arteries. Both of these techniques depend upon a competent aortic valve. The distal anastomosis between a woven Teflon graft and the aorta is performed. The coronary arteries are directly perfused while the proximal anastomosis is done.

Aortic insufficiency usually is due to dilatation of the annulus more commonly seen in chronic cases, or by a loss of support or fixation of the intimal attachment of the valve commissures. The latter allows the leaflets to prolapse downwards, rendering the aortic valve incompetent. It is more common in the acute forms. Correction of valvular insufficiency is sometimes accomplished by merely re-approximating the two layers of the aorta just distal to the annulus. Should this fail to correct the insufficiency, it is preferable to replace the incompetent valve with a ball-valve prosthesis.

Complications

Neurological deficits may be related to spinal cord damage and this can result from either anomalous supply or interruption of the normal supply by the dissection or election of the level of division by the surgeon. Tamponade by progression of a dissection proximally or rupture of a segment of proximal aorta can occur during operation or postoperatively, particularly when fenestration is performed. Secondary hemorrhage from the dissected, distorted aorta develops, again most likely with the fenestration procedure. The dissection may progress to involve a vital organ even when the tear is closed, occurring perhaps from bleeding from the vasa vasorum. Aneurysmal formation can occur either at the graft site or where the fenestration is done.

Postoperative Care

The postoperative care should entail the usual care for any patient who has a large thoracic wound and who has been on cardiopulmonary bypass with systemic heparinization. Control of hypertension immediately after operation by the appropriate drugs such as guanethidine or reserpine to protect against progression is a worthy precaution. The outline given by Wheat and colleagues[11] for controlling hypertension would serve well following operation.

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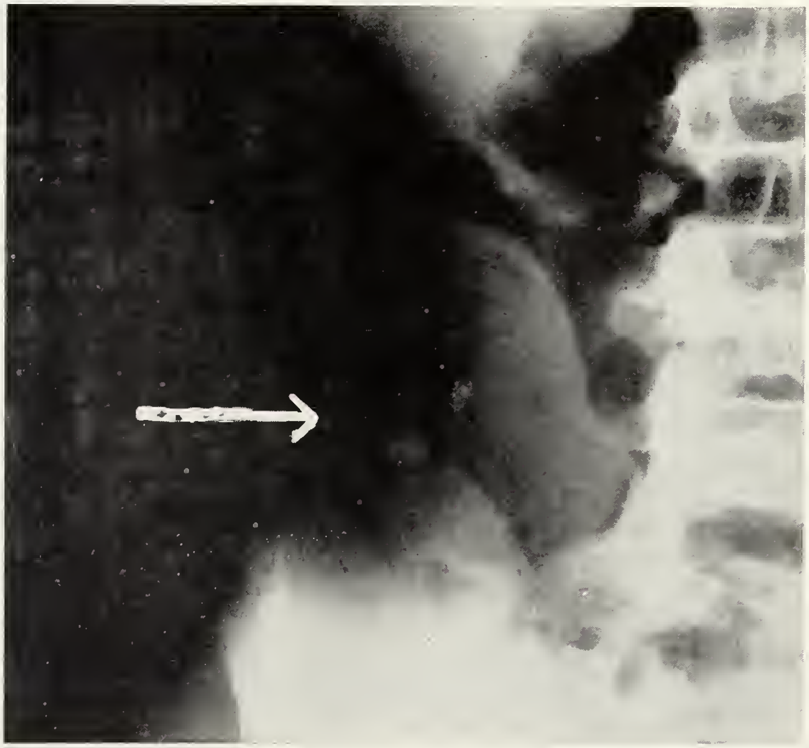
X-RAY FILM OF THE MONTH

S. E. PUCKETTE, JR., M. D.
Medical College Hospital
Charleston, S. C.



This flat film of the abdomen was taken on a 13 year old colored male who five days before had noted onset of periumbilical pain accompanied by anorexia, fever and later nausea and vomiting. Shortly before the patient was seen, the pain began to localize in the right lower quadrant. Physical examination revealed a temperature of 104°, involuntary guarding, and tenderness over the right lower quadrant. No rebound tenderness could be elicited. Rectal examination was normal. The white count was 14,000 per cu mm, of which 97% were polymorphs.

One notes on the x-ray film two rounded calcifications in the right lower quadrant representing appendiceal enteroliths. One will also note the concavity in the cecal gas shadow due to an impression from an appendiceal abscess.

Appendiceal enteroliths are seen in approximately 10% of all patients with acute appendicitis. They are usually in the neighborhood of 1 cm in diameter, oval in outline, and of varying density. The calcium may be distributed within them in a homogenous pattern, may be laminated, or may outline the periphery. Due to the somewhat varied location of the cecum, the fecaliths may be seen either in the right upper or the lower quadrants. They have a prognostic implication in that the incidence of gangrene and perforation in association with them is very high, some reports indicating as much as 90%. This of course is what has happened here.

Approximately 10% of appendiceal enteroliths are found incidentally in patients without symptoms referable to the appendix. However, it is not uncommon for acute appendicitis to develop weeks or months later and the presence of a fecalith is therefore considered to be an indication for prophylactic appendectomy. Probably one would wish to do a barium enema in these asymptomatic patients to ascertain definitely that the calcification is indeed in the appendix, as gallstones, ureteral stones, etc., can mimic this picture closely.

REFERENCE

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Diazepam (Valium) in the Control of Status Epilepticus—D. Lalji, C. S. Hosking, and J. M. Sutherland. Med J Aust 1:542-545 (March 18) 1967.

Thirty-two patients admitted to hospital in status epilepticus were treated with diazepam (Valium) given parenterally, either alone or in combination with other drugs. Results suggest that diazepam controls status epilepticus in the majority of instances within two to ten minutes of the injection, whether it is given intramuscularly or intravenously. The concurrent intravenous administration of phenytoin results in a additive anticonvulsant action in status epilepticus, whereas the concurrent use of phenytoin intramuscularly is mainly of value as a means of instituting maintenance anticonvulsant therapy at a stage when the patient is unable to swallow. The treatment of status epilepticus is a medical emergency, and it is wise to have a therapeutic regimen available which can be put into practice rapidly. Diazepam has not been associated with important side effects.

Clinical Evaluation of a New Sequential Oral Contraception Agent—L. E. Cowan. Canad Med Assoc J 96:1208-1211 (April 29) 1967.

One hundred and seventy-eight patients were placed on a new sequential oral contraceptive preparation (ORTHONOVUM SQ) and observed through a total of 1,785 months in an effort to determine the effectiveness and patient acceptability of the compound. Patients with varicose veins or previous thrombophlebitis were not excluded from the study. The most frequent side effect was breakthrough bleeding which occurred in 19 patients. One patient became pregnant while apparently taking the tablets as directed and another was already pregnant when started on the drug. However, in spite of at least four weeks of continued ingestion after conception, both gave birth to completely normal female infants. Chloasma noted in four patients while on a previous combination oral contraceptive cleared on this medication. There was no aggravation of thrombophlebitis or varicose veins.

President's Page

Many people think medical association dues are too high and at first glance such would appear to be true. Three hundred thousand physicians, even if they were all of one mind, cannot hope to match financially ten to fifteen million union members in trying to raise money to influence politics, for instance, so why try. If we are not trying to influence economic-social-political concepts and actions organized medicine should not need much money.

The truth is that we are indeed trying to influence these activities. Our principal forte however is not money but "truth." Believing that "Truth crushed to earth will rise again" we try to emphasize facts and to discredit unrealistic fictional theory.

This takes money, and while we do not have access to large amounts for such purposes, let us look at what we do get even on a state level for our dues.

We have some ten standing committees and about ten subcommittees. Each usually meets one to several times a year. Council itself meets several times a year. These seventeen men go to Columbia from all over the state, using the better part of an entire day each time. And none receives remuneration, not even mileage. None of the members of any of these committees is paid for his time or expense. The same is true for physicians attending legislative hearings, etc.

The salary of the editor of the Journal in private business life would probably be fifteen thousand dollars, as it is his work is largely a labor of love and his salary negligible.

Our Executive Secretary has proven of inestimable value and his services would have cost much more than his salary if contracted for "by the job" as legal advisor, lobbyist, adviser-in-general, overall supervisor, etc., etc.

The trips and advice supplied free by one certain physician in the eastern part of the state are worth thousands of dollars to us every year.

Our dues pay for our annual meetings, which furnish us with one excellent postgraduate experience each year provided we attend and learn what we can. The meetings do not suit everybody but I have never attended one from which I did not learn a lot and I have not missed many in thirty five years.

On the legislative front we have only one paid part-time-lobbyist, our Executive Secretary. With the help of those physicians who are willing to participate, the legislature is kept informed as to what the truth is concerning the several matters involving our profession that seem to come up every year. The legislators always seem pleased to hear our views, apparently realizing we are simply dealing in what we think is the truth. We do not ask for any favors or special legislative dispensation. This one-man-plus-a-few-physicians lobby has proved very effective apparently in furnishing the legislature with information it usually accepts as factual. While we do not always agree—and indeed should not necessarily expect to—our relationship with the legislature is flattering.

The AMA's activities are too many to go into here. Then too we have the county medical societies' activities to remember. So when time comes for us to pay our dues let us consider what all is done with them. I believe we would all agree that our dues buy miraculous returns. Labor unions spend so much more than we do that there is no comparison. We should not try to compete with them in dollars. Neither should we try to compete with any other group in dollars. So long as we are careful to deal simply in the truth and seek neither to receive or give unjust favors we can continue to do much with little.

Norman O. Eaddy, M. D.

Editorials

The AMA on Abortion

In May the House updated the Association's 1871 policy on therapeutic abortion which, according to the Reference Committee report which was adopted, was not only antiquated but lacked even the rudiments of adequate safeguards to prevent abuse. The updated policy, the House agreed, is in keeping with modern scientific knowledge, contains necessary safeguards and permits the physician to exercise his personal conscience and medical judgment in the best interest of his patient, over-riding objectives in any medical decision.

The following was established as policy of the American Medical Association:

". . . Recognizing that there are many physicians who, on moral or religious grounds, oppose therapeutic abortion under any circumstances, the American Medical Association is opposed to induced abortion except when:

"(1) There is documented medical evidence that continuance of the pregnancy may threaten the health or life of the mother, or

"(2) There is documented medical evidence that the infant may be born with incapacitating physical deformity or mental deficiency, or

"(3) There is documented medical evidence that continuance of a pregnancy, resulting from legally established statutory or forcible rape or incest may constitute a threat to the mental or physical health of the patient;

"(4) Two other physicians chosen because of their recognized professional competence have examined the patient and have concurred in writing; and

"(5) The procedure is performed in a hospital accredited by the Joint Commission on Accreditation of Hospitals.

"It is to be considered consistent with the principles of ethics of the American Medical Association for physicians to provide medical information to State Legislatures in their consideration of revision and/or the development of new legislation regarding therapeutic abortion."

Medicine and Osteopathy

The AMA House adopted the following recommendations of the Board regarding the medical profession's relationships with osteopathy:

1. Authorize the Board of Trustees to begin promptly negotiations directed toward beginning official change of schools of osteopathy to schools of medicine. (It is understood that from the American Medical Association funds will be required to conduct these negotiations, and assistance in identifying and securing additional funds from other sources to support efforts toward changing the schools.)

2. Authorize the Council on Medical Education to undertake negotiations to establish means by which selected students with proven satisfactory scholastic ability in schools of osteopathy may be considered by schools of medicine for transfer into medical school classes.

The primary issue in the relationship of medicine and osteopathy, as recognized by the House, seems to be not that of cultism as opposed to science. Rather the issue appears to be one level of medical education and practice as opposed to another and lower level of education and practice. The extensive and growing licensure of osteopathic physicians for the unrestricted practice of medicine and the nature of osteopathic education strongly indicate that time alone will resolve shortly the problem of cultism in relation to osteopathy.

* * *

Medical College Alumni and Honors

On June 14, I attended the Commencement Exercises of the University of Texas Medical Branch at Galveston. The occasion was to represent the Alumni Association of the Medical College of South Carolina upon the special honoring of Dr. Kenneth M. Lynch. "Our" Dr. Lynch is a graduate of the University of Texas School of Medicine, and this was a "Distinguished Service" award by his Alma Mater to its outstanding alumnus. Dr. Lynch received the "Ashbel Smith Medallion and Distinguished Service to Medicine" award, the highest honor given by the University of Texas.

At the impressive ceremonies there I was not only pleased but astounded. The entire theme was directed to the importance of alumni, both the current and past graduates, including the representative of South Carolina. (As president of the Alumni Association of the Medical College of South Carolina I was invited to join the academic procession and was introduced to a great audience.) I learned lessons which I hope to promote here.

The following quoted statement is the gist of a news release through public relations "channels" of the schools in Charleston and in Galveston. It was garbled in the South Carolina press.

"Although a graduate of the University of Texas, practically the entire service on which the honor is based was given from and at the Medical College of South Carolina. Dr. Lynch also holds three honorary degrees from South Carolina institutions—Doctor of Laws from both the University of South Carolina and the College of Charleston, and Doctor of Science from Clemson University.

"He has also been awarded the Gold Medal for Research by the American Medical Association, the Research Medal as well as the Distinguished Service Medal of the Southern Medical Association, the Merit Award of the American Medical Education Foundation and the 1957 Medal of the American Cancer Society. He is also a member of the scholastic honor societies Phi Beta Kappa at the University of South Carolina and Alpha Omega Alpha at the University of Texas as well as at the Medical College of South Carolina.

"After graduating at the University of Texas Dr. Lynch accepted appointment as Resident Pathologist at the Philadelphia General Hospital and then as Instructor of Pathology at the University of Pennsylvania.

"When the Medical College of South Carolina was taken over as a state institution in 1913, he was invited to the Professorship of Pathology, and became the first full-time faculty member of that institution which was founded in 1824 as the first medical school south of Baltimore. Except for a five-year interim in private practice in Dallas, Dr. Lynch occupied the chair of Pathology at the Medical College of South Carolina, and was consulting pathologist to many South Carolina hospitals, until his retirement in 1960 with the title of Professor Emeritus of Pathology.

"In 1935 Dr. Lynch was appointed Vice-Dean of the Medical College, and then Dean in 1943. The title of that chief executive position was changed to President in 1949. At his retirement on July 1, 1960, under the mandates of the State Retirement System, he was given the title of 'Chancellor.' In his tenure in South Carolina he has served in many positions of honor and trust, including the chairmanship of the State Board of Health and the presidency of the South Carolina Medical Association.

"He has also been an active participant in many medical and scientific organizations of national level and has served in official position in a number, including the presidency of the American Society of Clinical Pathology and of the American Society of Tropical Medicine as well as the vice-presidency of the American Medical Association. It also includes membership in the Board of Governors of the American College of Physicians, the Board of Directors of the American Society for the Control of Cancer, an Advisory Council of the National Institutes of Health, the Council of the Southern Medical Association, and the Editorial Boards of several national medical journals. He has also served as Chairman of the Section on Pathology of both the American Medical Association and the Southern Medical Association as well as Chairman of the Section on Medical Education of the latter. Presently he is Chairman of the Scientific Advisory Board of the Council for Tobacco Research—U. S. A. He has been listed in 'Who's Who' as well as a number of other biographical publications, ever since 1937.

"From a beginning at the University of Pennsylvania Dr. Lynch has been throughout his career active in medical research, and he has produced more than 100 articles published in medical science journals, as well as two books, one of which was published in England as well as in America. The subjects of his researches have been of wide range, but majoring in protozoan disease, in a once common 'horrid' disease called 'granuloma inguinale,' and in air pollution and cancer of the lung. In all three areas he is credited with pioneering accomplishments. Currently he is the 'chief investigator' in two research projects at the Medical College which are supported by grants from national level foundations, one of which is the new Belle W. Baruch Foundation.

"As president of the Medical College from 1944 to 1960, Dr. Lynch developed the Master Plan of the Expansion Program which has been at the forefront in the modern conception of the 'health and medical educational, service and research center.' His program has produced an outstanding medical complex of that order in the midsection of Charleston. It is now in a resurgence of completion.

"Dr. Lynch is currently engaged in a mission of writing the story of 'Medical Schooling in South Carolina,' of which 12 chapters have already been published as articles in *The Journal of the South Carolina Medical Association.* In this narrative, covering the period from the beginning of the nineteenth century to the present are, he says his objective lies in 'taking it out of the pomp of history and making it the property of the affections.' "

Charles R. May, M. D.

Abstract of the Minutes of Council South Carolina Medical Association

The Council of the SCMA met in a special meeting Wednesday, June 14, 1967, at the newly constructed home of Blue Cross-Blue Shield on Highway I-20, near Columbia.

Mr. Meadors, Executive Secretary, reported that, as directed by Council in May 1967 meeting, a sufficient amount of stocks were liquidated to pay the $15,000.00 indebtedness of the Association and there is now no outstanding indebtedness. The Association has paid $200.00 to Mrs. Robert Hagerty, Chairman of the Health Careers Committee of the SCMA's Auxiliary, as directed by Council, and a check will be sent to the Student Medical Association, AMA, as authorized.

Mr. Meadors indicated that he has requested information regarding membership in the State Chamber of Commerce, including expense, and etc. The information should be forthcoming shortly and will be reported at the October meeting.

The SCMA Employee Retirement Plan was adopted effective July 1, 1966, subject to approval of the Internal Revenue Service; and, since certain amendments are required by the Treasury Department, A Resolution was presented and passed.

Mr. Meadors indicated that a galley proof of the new Constitution and By-laws is being given to the printer and copies will be mailed to the members of the Association shortly.

Council opposed any change in the status of Dr. Mitchell (spelled out in Special S. C. Legislature Bill in 1962).

Committees were appointed. (See elsewhere in this Journal.)

It was pointed out that the subcommittee, Injuries in Athletics, under the Standing Committee on Cooperative Activities, has been changed to Committee on Athletics and Sports.

Council, on motion by Dr. Cain, approved Dr. Eaddy's letter in reply to Palmedico Products' inquiry regarding the repackaging of drugs. Dr. Eaddy's letter indicated that it is unethical for physicians to hold an interest in pharmaceutical companies involved in the repackaging and sale of drugs.

By action of Council May 7, 1967, Chairman of Council was instructed to appoint a committee of three to assist the S. C. Hospital Association in establishing rules for releasing information on hospital patients. Members appointed are Dr. Joe Cain, and Dr. Joe Waring. Dr. Perry will name the third member at a later time.

Dr. Joe Cain discussed a recent meeting that he had attended, on invitation, with the Association of Claims Representatives. The members of this group represent casualty companies, whose function it is to settle claims regarding collisons and other accident problems, including Workman's Compensation. Members of the group indicated that other state medical associations had appointed special committees as liaison with insurance claims adjusters. Dr. Cain had been invited to the meeting because of his position as Chairman of the Insurance Committee, SCMA. Dr. Cain felt that the Mediation Committee of the society might function in the role of liaison with the Claims Representatives, and moved that Council ask the Mediation Committee to invite the Insurance Claims Committee to meet with them and to see if the committee can help with the problems. Motion was seconded and passed. The secretary was instructed to write a letter to the Mediation Committee regarding the action of Council.

Dr. Waring read a letter from Dr. Charles P. Summerall, III, Acting Program Coordinator of Regional Medical Program in South Carolina, and indicated that he had been requested by Dr. Summerall to bring the Outline to the attention of Council. Dr. Johnson spoke in favor of endorsement and moved that SCMA, through this Council, endorse and support the S. C. Regional Medical Program Outline as set up by the Medical College. The motion was seconded, discussed, and passed.

Dr. Waring asked if Council would authorize the Public Relations Committee to spend up to $200.00 a year for display panels used by Blue Cross-Blue Shield. Dr. Eaddy moved the expenditure be authorized. The motion was seconded and passed.

Dr. Waring asked Council if an abstract of the minutes might be printed in the Journal rather than the minutes in detail in order to save space. This was put into the form of a motion, seconded, and passed.

Dr. Waring read a letter from Mr. Samuel A. Cothran, Managing Editor of the News and Courier, expressing appreciation for the award presented his paper by SCMA.

Dr. Johnson discussed the increasing expense and precedence of the President's party at the end of his tenure of office. Dr. Atwill moved that SCMA in the future honor the outgoing president with a party. A substitute motion was made that careful consideration be given to this situation and that action be deferred until a later date.

Ben N. Miller, M. D.

SCMA COMMITTEES 1967

Committee on Scientific Program: Dr. James S. Garner of Mullins and Dr. Dana Mitchell of Columbia will succeed Dr. Myers Hicks and Dr. N. B. Baroody of Florence.

Committee on Legislative Activities: Dr. Donald G. Kilgore, Jr. of Greenville and Dr. D. Strother Pope of Columbia will succeed themselves.

Committee on Cooperative Activities: Dr. Robert S. Solomon, Moncks Corner and Dr. William C. Cantey, Columbia will succeed themselves.

Committee on Medical Education: Dr. William A. Klauber, Greenwood and Dr. Dale Groom, Charleston will succeed themselves.

Committee on Medical Services: Dr. A. Izard Josey, Columbia, Dr. Hugh M. DuBose, Columbia, and Dr. Martin M. Teague, Laurens will succeed themselves.

Committee on Mental Health: Dr. James B. Galloway, Columbia will succeed himself. Dr. R. R. Mellette, Jr., Charleston will succeed Dr. Edward M. Burn, Charleston.

Committee on Public Relations: Dr. J. I. Waring, Charleston and Dr. Robert S. Solomon, Moncks Corner to succeed themselves.

Committee on Industrial Medicine: Dr. H. Leon Poole, Spartanburg and Dr. Allen R. Slone, Hartsville will succeed themselves.

Committee on Maternal Health: Dr. William W. King, Jr., Newberry and Dr. Samuel B. Moyle, Walhalla will succeed themselves. Dr. Francis P. Owings' resignation was accepted. Dr. William L. Perry's resignation was accepted, and Dr. Harrison L. Peeples, Estill will serve the unexpired term of Dr. Perry.

Committee on Infant & Child Health: Dr. Sam P. Fleming, Spartanburg will succeed himself. Dr. Marion Caughman, Orangeburg will succeed Dr. Walter M. Hart, Florence. Council accepted Dr. J. Hal Jameson's resignation.

Mediation Committee: (Elected by the

House of Delegates). Dr. R. G. Latimer, Cayce will succeed himself (2nd Dist.); Dr. Max A. Culp, Fort Mill will succeed Dr. Ripon W. LaRoche (5th Dist.); and, Dr. John W. Rheney, Jr., Orangeburg will succeed Dr. James L. Wells (8th Dist.).

Memorial Committee: Dr. Samuel O. Cantey, Jr., Marion will succeed himself.

Committee on Constitution and By-Laws: Dr. J. Gavin Appleby, St. George will succeed Dr. Joseph D. Thomas, Denmark. Dr. William H. Hunter, Clemson will succeed himself.

ABBREVIATED MINUTES OF THE ANNUAL MEETING

South Carolina Medical Association

MAY 8, 9, 10, 1967

The meeting was opened with due ceremony. Seventy-five qualified delegates were reported present.

Resolutions were then presented and were referred to appropriate reference committees.

Charleston Delegation, Resolution #1.

Subject: Reaffirmation of Direct Billing (IRP) Program.

Whereas, it is the policy of the American Medical Association that direct billing of patients by physicians, wherever possible, is preferred to accepting assigned vendor-type payments, and

Whereas, direct billing of patients will best prevent the fixing of fees by public or private third party insurers; Therefore be it

Resolved, that the House of Delegates of the South Carolina Medical Association reaffirms its resolution recommending to its members the use of direct billing of patients and the continued voluntary use of the Individual Responsibility Program.

Subject: Compulsory Generic Prescribing.

Whereas, Senator Long of Louisiana seeks to compel physicians to prescribe by generic name for any patient whose care is subsidized by the federal government (even going so far as to make it mandatory for pharmacists to substitute any supposedly equivalent produce which may be cheaper): and

Whereas, Senator Montoya (S17) seeks the same end (without compulsion) by reimbursing only the cost of a cheaper generic "equivalent"; Senator Aiken (S110) does likewise; and

Whereas, it has been the policy of the South Carolina Medical Association and the American Medical Association to oppose compulsory generic prescribing as an interference with the prerogative of the physician who must bear the responsibility for the treatment of the patient; therefore be it

Resolved, that the South Carolina Medical Association makes known its continued opposition to compulsory generic prescribing regardless of the status of the patient; and further be it

Resolved, that this resolution be presented in June, 1967, to the House of Delegates of the American Medical Association by the Delegates from South Carolina.

Subject: Opposition to the Hart Bill, S-260.

Whereas, The Hart Bill, S-260, is similar to a Bill. S-2568, introduced in 1966 to the Senate by Senator Hart and opposed by the South Carolina Medical Association at its regular annual meeting in May, 1966, and

Whereas, in the interim nothing has transpired to cause the South Carolina Medical Association to change its opinion regarding this proposed legislation; therefore be it

Resolved, that the South Carolina Medical Association reaffirms its opposition to the Hart Bill and notifies the American Medical Association, through its Delegates, and South Carolinians in the Senate of this opposition.

Subject: Support of Hospital-Based Specialists.

Whereas, The AMA House of Delegates, the College of American Pathologists and the American College of Radiology have issued statements of policy declaring that hospital-based specialists are engaged in the practice of medicine and that these specialists should bill and collect fees from their patients in the same manner as other physicians, and

Whereas, in accordance with this policy, hospital-based specialists (anesthesiologists, radiologists, pathologists and psychiatrists) were placed under Part B of Title XVIII of Public Law 89-97, therefore be it

Resolved, that the South Carolina Medical Association supports the position of the AMA in regard to hospital-based specialists; and be it further

Resolved, that the South Carolina Medical Association opposes attempts in Congress to force hospital-based specialists to bill their patients under Part A of Public Law 89-97, or in any manner other than the law now allows, and be it further

Resolved, that all South Carolinians in Congress and in the Senate be notified of this resolution.

Subject: Blue Shield Withdrawal from Medicare.

Whereas, the House of Delegates is the Corporation

Dr. Rouse Speaks

of the South Carolina Medical Care Plan (Blue Shield): and

Whereas, the South Carolina Medical Care Plan has sought the role and has been nominated by the Department of Health, Education and Welfare as the carrier for Medicare in South Carolina; and

Whereas, the Social Security Administration and its representatives have clearly announced that carriers for Medicare will act as representatives of the Federal Government, and thereby must become an extension and arm of the government; and

Whereas, therefore, it follows that the Board of Directors and the House of Delegates of the South Carolina Medical Association, which is the Corporation of Blue Shield, would likewise, necessarily become agents of the Federal Government in the implementation of Medicare; and

Whereas, it appears that by capturing the Blue Cross-Blue Shield mechanism the Federal Government causes the physicians of South Carolina to become the actual promoters of the very scheme of socialized medicine they have correctly, and steadfastly opposed for decades; now therefore be it

Resolved, that the House of Delegates of the South Carolina Medical Association, in its capacity as the Corporation of the South Carolina Medical Care Plan (Blue Shield), instruct the Directors of Blue Shield to withdraw as quickly as possible as the carrier for Part B of the Medicare Act (P.L. 89-97); and be it further

Resolved, that should the intent of the above resolution not be realized within six months that the House of Delegates of the South Carolina Medical Association terminate its role as the Corporate Body of the South Carolina Medical Care Plan.

Subject: Certification and Recertification.

Whereas, The Charleston County Medical Society by earlier resolution has established to its satisfaction that certification and recertification of patients under Public Law 89-97 is objectionable and not required by law and has urged the staffs of local hospitals in Charleston to consider dispensing with this procedure, and

Whereas, in recent testimony before the House Ways and Means Committee of the Congress of the United States the President of the American Hospital Association, Dr. George Cartmill, and the President of the Blue Cross Association, Walter J. McNerney, have each proposed that certification *requirements be eliminated;* now, therefore be it

Resolved, that the South Carolina Medical Association urge the staffs of all hospitals in South Carolina to dispense with Certification and Recertification of patients under Public Law 89-97 and request the members of the South Carolina Medical Association to cease signing such Certification and Recertification; and be it further

Resolved, that the South Carolina Medical Association request its Delegates to the American Medical Association to introduce a comparable resolution at the national level at the Annual Meeting of the American Medical Association in June, 1967.

Subject: Legislative Implementation of Title XIX, P.L. 89-97.

Whereas, implementation of Title XIX, P.L. 89-97 by some states has led to such inequitable situations as:

1. Limiting those physicians eligible to practice under Title XIX, P.L. 89-97, as in New York;
2. Socialization of the medical care of an enormous segment of a state's population (New York and Minnesota) through an unrealistically lax interpretation of need;
3. Fee systems which may be dual (Kentucky) or on a welfare scale (Minnesota); therefore be it

Resolved, by the South Carolina Medical Association that any legislative implementation of Title XIX of P.L. 89-97 should:

1. Grant patients choice of physicians limited only by licensure by the South Carolina State Board of Medical Examiners;
2. Set a realistic interpretation of medical need;
3. Recognize no fee system other than the physician's usual and customary charge, and be it further

Resolved, that Governor McNair and all members of the South Carolina State Legislature be furnished with copies of this resolution at once.

Subject: Direct Billing under Title XIX, P.L. 89-97.

Whereas, Title XIX, P.L. 89-97, does not prohibit *direct billing* of patients by their physicians, but at the same time fails to guarantee explicitly the right of the physician to bill his patients directly under this program, without assignment, and

Whereas, regulations and guidelines subsequently promulgated at a national level and in various states have insisted on compulsory assignment through extension of the old vendor system, rather than permitting the alternative clearly spelled out in Title XVIII.

Therefore, Be It Resolved that the South Carolina

Retiring V-P Gets Citation

Medical Association reaffirms its belief that the rights to *direct billing* without assignment under Title XIX, P.L. 89-97 is essential and should be clearly and unequivocally delineated by law, and be it further

Resolved, that the Secretary of the South Carolina Medical Association be directed to send a copy of this Resolution to each member of the Ways and Means Committee of the United States House of Representatives and to all United States Senators and Representatives from South Carolina, with the request that Title XIX, P.L. 89-97, be so amended.

Subject: Congressional Investigation of the Department of Health, Education and Welfare.

Whereas, the Department of Health, Education and Welfare appears to be the spearhead of a conspiracy to change the nature of our Constitutional Republic by gradually and deceptively converting it to a Socialistic Welfare State, and

Whereas, it is suspected that many of those appointed to positions of importance in the Department of Health, Education and Welfare over the past several decades subscribe to the philosophy of Socialism and are actively endeavoring to weaken the structure of our free enterprise system and to destroy Capitalism; now, therefore be it

Resolved, that the South Carolina Medical Association calls upon the Congress of the United States, through an appropriate committee, to investigate the Department of Health, Education and Welfare, its personnel, its political philosophy and its ultimate aims and goals, and be it further

Resolved, that the South Carolina Medical Association instructs its delegates to the American Medical Association to present this resolution at the Annual Meeting in June, 1967, and be it further

Resolved, that a copy of the present resolution be sent by the Secretary of the South Carolina Medical Association to each United States Senator and Congressman from the State of South Carolina and to delegates and alternate delegates from the State of South Carolina to the House of Delegates of the American Medical Association.

Dr. Eddie Parker:

Charleston Delegation. Resolution #9. You do not have a copy of this. It reads as follows:

Whereas, the presently functioning plan of the South Carolina Blue Shield Corporation is not in harmony with the original purpose as intended by the medical profession, therefore

Be It Resolved, that the Charleston County Medical Society is in opposition to the fact that the Blue Shield Corporation is operating in the field of "commercial" health insurance and opposes adoption of enabling legislation for such purposes, and further be it

Resolved, that this position be presented to the Delegates of the South Carolina Medical Association.

Dr. J. Gavin Appleby, Dorchester:

This is the Resolution of the Dorchester County Medical Society.

Be it resolved that the Corporate meeting of the South Carolina Medical Care Plan shall include as a mandatory part of its meeting the full presentation and discussion of a full financial report of the previous year's business.

Further that said report shall include a complete coverage of all Medicare business in a separate section from the private (Blue Shield) business.

Further that said report shall include an itemized list of the top ten employees beginning with the Director along with their respective salaries with a clear breakdown to show the amounts received by them from Blue Shield and the amounts from Medicare.

Further be it resolved that said report shall be mailed to all members of the South Carolina Medical Association thirty days prior to the Annual Meeting of the South Carolina Medical Care Plan.

Dr. Tucker Weston:

Columbia Delegation, Resolution #1.

Subject: Payment of Blue Shield Funds to Licensed Certified Registered Nurse Anesthetists.

Whereas, by resolution dated May 10, 1966 the South Carolina Medical Association acting in the capacity of the Corporation of the South Carolina Medical Care Plan, directed that Blue Shield funds be reserved only for services rendered by licensed doctors of medicine; and

Whereas, the purpose of, and effect of the aforesaid resolution was, and is, the deprivation of Blue Shield payments to nurse anesthetists; and

Whereas, the adoption of the aforesaid resolution has resulted in the payment of Blue Shield benefits for anesthesia services being reserved entirely to anesthesiologists to the exclusion of certified licensed registered nurse anesthetists; and

Whereas, the House of Delegates of the South Carolina Medical Association feels that the Association can better serve its patients and its members by allowing Blue Shield benefits to be paid to certified licensed registered nurse anesthetists in addition to payments made to anesthesiologists;

NOW, THEREFORE, BE IT RESOLVED THAT: The South Carolina Medical Association, acting in the capacity of the Corporation of the South Carolina Medical Care Plan, hereby directs that Blue Shield funds be reserved only for services rendered by licensed doctors of medicine, including anesthesiologists, and in addition thereto, to licensed certified registered nurse anesthetists.

Dr. Tucker Weston:

Resolved, that the Executive Committee of the State Board of Health be elected in staggered terms with an election for one member to be held each year at the Annual Meeting of the House of Delegates of the South Carolina Medical Association.

(Resolutions Continued) *Dr. Tucker Weston:*

Resolved, that the Constitution and By-Laws of the South Carolina Medical Association be amended so that only the five most immediate past presidents be a member of the House of Delegates with the privilege of voting. Any past president may have the privilege of the floor of the House of Delegates.

Dr. John Holler, Columbia:

The Columbia Medical Society has two short resolutions.

"Resolutions adopted by the Delegation of the Columbia Medical Society, Tuesday, May 4, 1967."

Resolved: That the delegation of the Columbia Medical Society to the South Carolina Medical Association favor the investigation concerning Blue Shield by the committee composed of three members of the House of Representatives of the General Assembly of South Carolina, three members of The Senate of the General Assembly of South Carolina, and three members to be appointed by the Governor.

Resolved: That the delegation of the Columbia Medical Society to the South Carolina Medical Association is in favor of Title XIX, of Public Law 89-97, known as Medicaid, funds being administered by the State Board of Health rather than the State Department of Public Welfare.

Dr. Trailkill, Chesterfield County:

Whereas, the Benevolence Fund of the South Carolina Medical Association is in need of further support, and

Whereas, The Chesterfield County Medical Society is cognizant of this fact, each member has donated $10.00 to said Benevolence Fund, therefore be it

Resloved, that the Chesterfield County Medical Society recommends that each individual member of the South Carolina Medical Association make a special donation to this Fund, and be it further

Resolved, that the South Carolina Medical Association adopt this resolution.

Supplemental Report, State Board of Health—

Dr. W. R. Wallace, Chairman:

Mr. President, gentlemen, the report of the Public Health has already been published in the Journal, and I hope you have read it. We think that it shows remarkable improvement in the mortality and the morbidity rate in South Carolina, particularly in reference to a good many diseases, particularly poliomyelitis which used to run three hundred or more cases and last year we had nine. This was brought out in the report.

The only reason I rise at this time is to express my appreciation and I am sure the appreciation of this Association to the long and faithful service of Dr. Peeples, who on account of health reasons has retired as Health Officer of South Carolina. He has been succeeded by Dr. Aycock who took over the first of the year. We also had the misfortune to lose Dr. Frank Owens, as Vice Chairman and member of the Board, because he unfortunately has been elected to the Senate from Richland County and because of duties there he has withdrawn. Also, personally, I would like to express to this Association my very deep appreciation for the fact that I have been a member of this Board for so long and Chairman for so many years. I have been advised to cut down on some of my extracurricular activities and so I requested the executive committee at this meeting, this morning, that I be allowed to retire as chairman. I still expect to be a member of the Board of Health until it is terminated in some other way, and Dr. Wyman King has been elected to succeed me. I am sure you will give him the cooperation and the help that you have given me. A vice-chairman, to succeed Dr. Owens, is Dr. Martin, of Anderson.

I think that will be the only supplemental report, Mr. President, thank you.

The Chair: Thank you, Dr. Wallace. Gentlemen, in appreciation of the years of devoted service of Dr. Peeples and of Dr. Wallace, as Chairman, I think we ought to rise and give them a round of applause. (The House rises and applauds)

Committee on Legislative Activities

Dr. Don Kilgore: Mr. President, Members of the House of Delegates, in addition to the report, which you already have in the Journal, some other items have come up which I felt should be brought to your attention. I believe these were brought up before the meeting of Council yesterday and I now bring them to you. The first of these deals with the labeling by the Florida Supreme Court of blood transfusions as a sale rather than a medical service. It says in a decision on March 2, 1967, contrary to the weight of authority elsewhere in the nation, the Florida Supreme Court has held that the supplying of blood by a hospital or blood bank is a sale, rather than a service. On this theory the Court upheld the intermediate court's decision that a complaint by a patient, who contracted serum hepatitis, should not have been dismissed by the trial court and must proceed to trial. The patient alleged that the sale occurred when the blood was supplied by the blood bank and that implied warranty of merchantability and fitness was breached when she contracted hepatitis.

In other jurisdictions courts have generally held that supplying blood for transfusions is a service and not a sale and that warranties appropriate to sales transactions do not arise. This was the ruling of the trial court and now the Florida Supreme Court rejects this view.

Now, this suit was instituted not only against the Community Blood Bank, Inc., but also against the attending physician and the authorities in the case. I think that you can see that this involves all of us.

Therefore, I would like to make this recommendation (reading) Recommendation #1:

"That the House of Delegates instruct the Legislative Committee with the advice and approval of Council and Executive Secretary to prepare and introduce a bill to amend the South Carolina laws on commerce to specifically exclude blood transfusion as a commodity and designate it as a medical service."

Mr. President, I would so move.

It was also brought up at Council yesterday requesting the following:

"That the House of Delegates instruct the Legislative Committee with the advice and approval of Council and the Executive Secretary to prepare and introduce a bill to legally define the medical indications for abortions in South Carolina."

It was pointed out that this was a vast no-man's land in this state and that the medical indications for abortion should be clearly defined and indicated.

"That the House of Delegates support the Traffic Safety Bill now before the Legislature as a long needed method to reduce the slaughter on our highways."

Dr. John H. Young: President Johnson and fellow members it is a great pleasure for me to represent before you the South Carolina Eye Bank. We have been operating, this coming June, ten years. We learned something in this time and we want to ask your cooperation in those things which we have learned. There is a report in the Journal and I hope that you all have read it.

I want to make a little supplementary suggestion in order that we may operate more efficiently. Because, at the time of decease there is always an emotional upset in the family, donation of the loved one's eyes is forgotten about. They mean to do it, of course, but they just forget and unless we can have your cooperation, as the attending physician at this time, whether you are family doctor, or surgeon or what not, that you cooperate with us to this extent—this is the supplement that we offer:

"Inasmuch as the Eye Bank has lost several pairs of eyes due to the fact that relatives are emotionally upset over the loss of their loved one, they do not, often, think of the donation of the deceased eyes to the Eye Bank until it is too late to remove them; the Eye Bank suggest:

(a) The doctor get in his record that the patient has donated his or her eyes to be given to the Eye Bank.

(b) That he or she respectively remind the relative of the deceased that the deceased desired his or her eyes to be given to the Eye Bank.

The South Carolina Eye Bank will certainly appreciate this cooperation of the South Carolina Medical Association by all its members.

In this way, friends, we have lost a large number of donations. We can not operate efficiently unless we get these eyes and we, of course, have learned these things through the operation of the past ten years, or almost ten years. I would be very pleased and the Eye Bank would be deeply appreciative if you would cooperate with this to this extent. Whenever you have a patient, whether you think that patient is going to die or not, because you know things happen sometimes that you do not expect, get it in your record that they have donated their eyes to the Eye Bank and if something should happen you can remind the relatives "You know, your loved one wanted to give the eye to go to the Eye Bank.

I thank you very kindly and I certainly do hope that you will all cooperate with the South Carolina Eye Bank to this end. Thank you.

Dr. Izard Josey: The report of the Committee on Medical Services has been duplicated and circulated and should be in your hands, a somewhat lengthy report. There is one addition I would like to make to it, in the body of the report, in that due to secretarial error it was not stated that Dr. Hugh DuBose was the sub-committee Chairman of Accident Prevention and I would like for you all to know that. And for the report, as part of that sub-committee report on Highway Safety was compiled by Dr. O. B. Mayer and I would like to have those two gentlemen credited for the efforts they put out.

In addition, rather late in the day, I received a communication from Dr. Charlie James who said he had been in consultation with the Health Department and I was asked to present this for your action. This was a resolution that they would like to have passed.

Resolution of The South Carolina Medical Association

Reaffirming Fluoridation.

Whereas, a considerable period of time has elapsed since the South Carolina Medical Association has considered the procedure of fluoridation of water supplies deficient in fluoride, and

Whereas, a large number of communities in the state of South Carolina have fluoridated their public water supplies since the last action by the South Carolina Medical Association, and

Whereas, no adverse health effects have developed as a result of this action by the communities, and

Whereas, there is a great need to utilize all preventive procedures in effectively reducing the dental disease known as dental caries.

Therefore Be It Resolved that the South Carolina Medical Association reaffirms their stand in support of fluoridation of public water supplies, as an effective and safe methods for the prevention and partial control of dental caries.

(To Be Continued)

IN MEMORIAM

Mr. President, Members, and Guests,

Since our last meeting thirty-two of our colleagues have fought the good fight and finished their course. This time has been set aside to honor them; not in commiseration, but in affectionate commemoration: not in grief, but in gratitude for their service to humanity; not in agonizing, but in admiration for their skills in the art of healing; not in regret for their passing, but in respect for their knowledge and understanding of death.

I, therefore, move, Mr. President, that we remember our friends standing while their names are read:

NAME	ADDRESS	DATE
Edward H. Barnwell	Wadmalaw Island	1878-1967
William P. Beckman	Columbia	1899-1966
Luder F. Behling	Charleston	1893-1967
Robert Cable, II	Greenville	1931-1966
Hugh Cathcart	Charleston	1913-1967
Roy Leicester Cochcroft	Bessemer City, N. C.	1921-1966
Paul M. Connor	Neeses	1868-1966
James Frank Davenport	Timmonsville	1901-1966
Rudolph Farmer, Jr.	Columbia	1930-1967
George Allworden Hennies	Lake Junaluska, N. C.	1885-1966
Oliver C. Holley	Leesville	1883-1966
Elmer A. Jamison	Easley	1924-1967
William McConnell Jones	Gastonia	1898-1966
John Watson Martin	Anderson	1902-1966
Joseph Addison Mason	Kingstree	1884-1966
John William Mole	Brunson	1877-1966
Harry Stoll Mustard	Boykin	1888-1966
William Earle McCurry	Columbia	1903-1966
Sol M. McLendon	Columbia	1905-1967
Philip K. McNair	Aiken	1918-1967
William Watson Painter	Mooresville	1909-1966
Lewis Wesley Pitts	Columbia	1908-1966
Julian Mims Riley	Charleston	1936-1967
John Levis Sanders	Greenville	1890-1966
A. Clifton Smith	Glenn Springs	1880-1967
Ralph Broadus Spires	DeFuniak Springs, Fla.	1903-1966
William A. Strickland	Westminster	1879-1966
Charles F. Timmons	Seneca	1924-1967
John Lesley Valley	Pickens	1883-1966
Andrew A. Walden	North Augusta	1878-1967
Charles Henry Young	Anderson	1884-1966
John E. Zeliff	Raleigh, N. C.	1921-1966

From God they came, and to Him they have returned, "for," in the words of St. Paul, "I am persuaded that neither death, nor life nor angels, nor principalities, nor powers, nor things present, nor things to come, nor height, nor depth, nor any other creature shall be able to separate us from the love of God—."

Respectfully submitted,

J. Richard Sosnowski, M. D.

MEDICAL COLLEGE OF SOUTH CAROLINA

Drs. Evatt and Peeples Voted Emeritus Status

Dr. Clay W. Evatt, a member of the Medical College clinical faculty since 1935, has been voted the rank of Prof. Emeritus of Ophthalmology by the Board of Trustees. Dr. George S. T. Peeples, a clinical faculty member since 1954, has been named Emeritus Clinical Prof. of Preventive Medicine. Both appointments are effective July 1.

Dr. Evatt is in the private practice of ophthalmology in Charleston. Dr. Peeples recently retired as State Health Officer.

Thoracic Operating Room to Open in August

An operating room devoted entirely to open heart surgery and other chest procedures will go into use in August at the Medical College Hospital. This will allow the speeding up of scheduling of elective heart surgery. An additional 150 people who have surgically correctable heart defects may be restored to health each year because of this development. Almost twice as many South Carolinians who need open heart surgery will be able to have their operations within the next year.

S. C. Tuberculosis Assn. Awards Grant

At the annual Board of Directors meeting of the S. C. Tuberculosis Association in Columbia, S. C., on June 7, the Medical Education Committee allocated $35,361.00 for the Respiratory Disease Educational program of the Medical College of South Carolina.

Huff Appointed Assistant To The President

William D. Huff has been named Assistant to the President for Development, effective July 1. Huff, who served as public relations consultant to the Medical College from 1955 to 1965, has been Director of Development here since 1965. He will continue handling public relations, alumni affairs, and fund-raising programs in addition to increased administrative assistance to the President.

The Office of Development will have increased activities on deferred giving programs to encourage bequests and other current gifts to the Medical College for research and institutional use.

School of AHS

The first full-scale registration for the School of Allied Health Sciences was held on July 10, with sixty students in seven paramedical areas. A new course for histologic technicians will be offered for the first time.

Dr. Gadsden Named Chemistry Interim Chairman

Dr. Richard H. Gadsden has been appointed as Interim Chairman of the Department of Chemistry.

Dr. Dale Groom visited Sheppard Air Force Base, Texas, June 5 and 6 as National Consultant in Cardiology to the Air Force; he lectured on cardiac auscultation and on coronary disease.

Dr. John E. Mahaffey served as an examiner for the American College of Anesthesiologists in Philadelphia in June.

What's Ahead for the Medical College

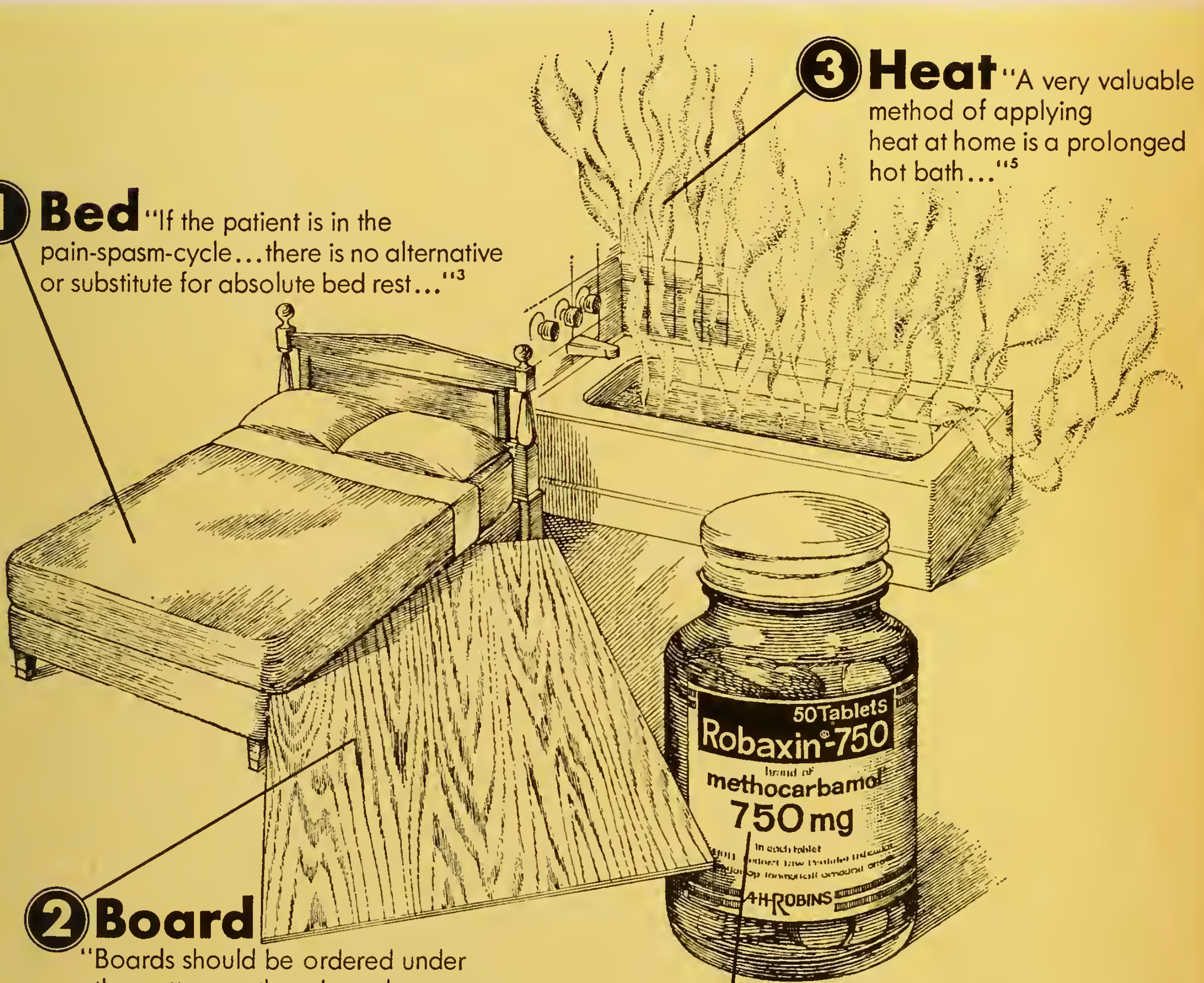
(Editor's note: The following is reprinted from a special edition of the Medical College News published May 12 for the General Assembly visit.)

Increasing the number of men and women trained for the health professions in South

LOW-BACK PAIN

A CONSERVATIVE, FOUR-POINT PROGRAM

The low back pain that is most frequently seen in general practice is mechanical in nature, i.e., postural back pain, joint dysfunction and acute back strain.[1,2] For this type of discomfort, a conservative regimen is usually sufficient to relieve aches and pains, and to help keep the patient functioning. Components of this basic program include:



① **Bed** "If the patient is in the pain-spasm-cycle…there is no alternative or substitute for absolute bed rest…"[3]

② **Board** "Boards should be ordered under the mattress…these boards act by immobilizing the spine…"[4]

③ **Heat** "A very valuable method of applying heat at home is a prolonged hot bath…"[5]

④ **Robaxin®-750** (methocarbamol, 750 mg. capsule-shaped tablets) A well-tolerated[6] skeletal muscle relaxant, methocarbamol helps relieve spasm "…without interfering with normal tone and movement."[7] And there is little likelihood of sedation.[6]

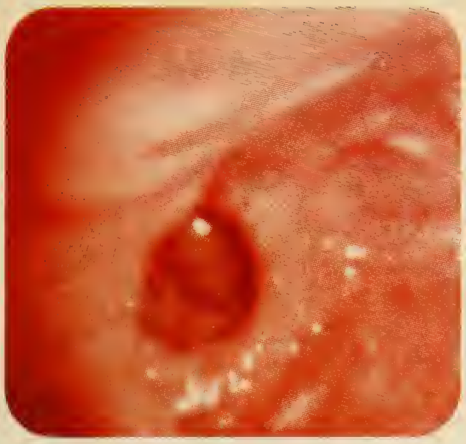
Indicated for relief of skeletal muscle spasm. **Contraindicated** in hypersensitive patients. **Side Effects** (lightheadedness, dizziness, drowsiness, nausea) may occur rarely, but usually disappear on reduced dosage. Hypersensitivity reactions develop infrequently. See product literature for further details. **Also available:** Robaxin® Tablets (methocarbamol, 500 mg.) Robaxin Injectable (methocarbamol, 1 Gm./10 cc.)

References: (1). Godfrey, C.M.: Applied Therap. *8*:950, 1966. (2). Gottschalk, L.A.: GP 33:91, 1966. (3). Rowe, M.L.: J. Occup. Med. 2:219, 1960. (4). Cozen, L.: South Dakota J. Med. *18*:26, 1965. (5). Soto-Hall, R.: Med. Sc. *14*:23, 1963. (6). Weiss, M. and Weiss, S.: J. Am. Osteopath. A. 62:142, 1962. (7). Feuer, S.G., *et al.*: New York J. Med. 62:1985, 1962.

A-H-ROBINS A. H. ROBINS COMPANY
RICHMOND, VIRGINIA 23220

NEW EVIDENCE:

Pro-Banthīne® (propantheline bromide) **gives positive, selective benefits in gastrointestinal disorders.**



Intragastric photograph of pyloric region showing complete relaxation of pyloric sphincter with 6 mg. of Pro-Banthīne intravenously.

An important problem in managing gastrointestinal disorders has been the choice of an anticholinergic agent which will act positively and selectively on the gastrointestinal tract without extensive secondary effects.

Recent direct observations with the cinefibergastroscope and intragastric photography[1] visually confirm previous evidence that Pro-Banthīne does, indeed, possess such selective activity.

Barowsky and his associates demonstrated that a minimal dose of 6 to 8 mg. of Pro-Banthīne intravenously produced complete relaxation of gastric activity. Secondary effects were not significant.

By contrast, it required 0.8 mg. or double the usual dose of atropine intravenously to achieve similar gastric relaxation. Side effects of this dosage of the belladonna alkaloid were pronounced. Ventricular rates were as high as 150 per minute.

For positive, selective anticholinergic benefits Pro-Banthīne is indicated in patients with peptic ulcer, gastritis, irritable colon and other forms of gastrointestinal hypermotility.

Dosage: The maximal tolerated dosage is usually the most effective. For most *adult* patients this will be four to six 15-mg. tablets daily in divided doses. In severe conditions as many as two tablets four to six times daily may be required. Pro-Banthīne (brand of propantheline bromide) is supplied as tablets of 15 mg., as prolonged-acting tablets of 30 mg. and, for parenteral use, as serum-type ampuls of 30 mg. The parenteral dose should be adjusted to the patient's requirement and may be up to 30 mg. or more every six hours, intramuscularly or intravenously.

Contraindications: In glaucoma or severe cardiac disease.

Precautions: Since varying degrees of urinary hesitancy may occur in the elderly male with prostatic hypertrophy, this should be watched for in such patients until they have gained some experience with the drug.

Although never reported, theoretically a curare-like action may occur with possible loss of voluntary muscle control. Such patients should receive prompt and continuing artificial respiration until the drug effect has been exhausted.

Side Effects The more common side effects, in order of incidence, are xerostomia, mydriasis, hesitancy of urination and gastric fullness.

[1] Barowsky, H.; Greene, L.; Bennett, R., and Buganza, G.: The Effect of Anticholinergic Drugs on Gastric Motility and Pyloric Function, Scientific Exhibit, Annual Convention of the American Medical Association, Chicago, Illinois, June 26-30, 1966.

°SEARLE *Research in the Service of Medicine*

Against these three major pathogens…

Pneumococci
Penicillin-Sensitive Staphylococci
Beta-Hemolytic Streptococci

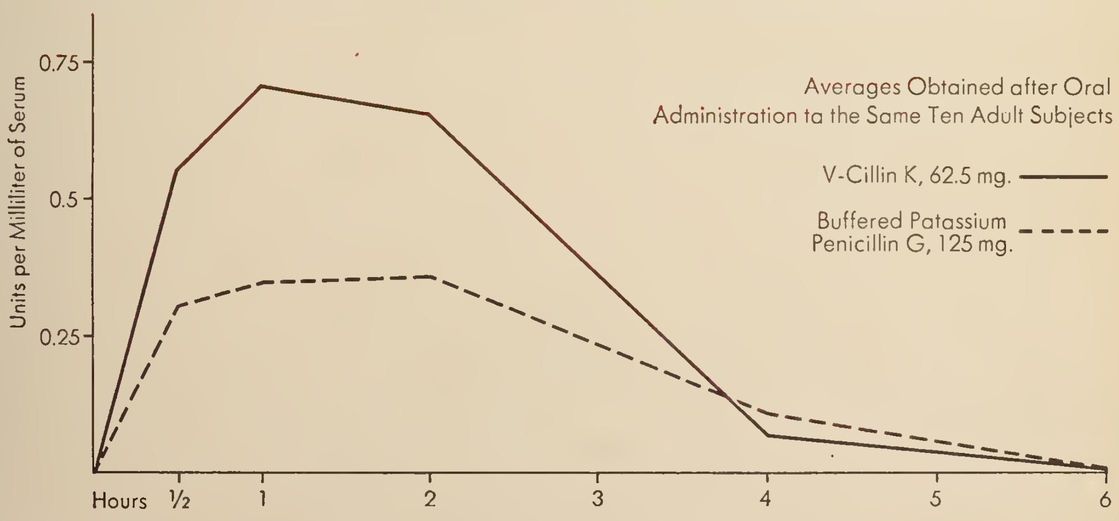
V-Cillin K® provides dependable oral antibacterial activity

because it combines a high degree of in-vitro activity...

Antibiotic	Staph. Aureus (Penicillin-Sensitive) MIC (mcg./ml.) Median	Range	Streptococcus, Group A MIC (mcg./ml.) Median	Range	Diplococcus Pneumoniae MIC (mcg./ml.) Median	Range
Penicillin V	0.02	0.02-0.04	0.02	0.003-0.4	0.01	0.005-0.2
Penicillin G	0.02	0.005-1.6	0.005	0.002-0.2	0.02	0.01-0.1
Methicillin	1.6	0.4-6.3	0.2	0.1-0.4	0.2	0.1-1.6
Oxacillin	0.4	0.1-3.1	0.04	0.02-0.4	0.1	0.04-0.8
Cloxacillin	0.2	0.2-0.8	0.1	0.1-0.8	—	—
Nafcillin	0.4	0.2-0.8	0.04	0.02-0.1	0.02	0.02-0.2
Ampicillin	0.2	0.1-0.8	0.02	0.01-0.04	0.02	0.01-0.04

Adapted from Klein, J. O., and Finland, M. New England J. Med., 269:1019, 1963.

with high blood levels, even in the presence of food



Adapted from Griffith, R. S., and Black, H. R.: Current Ther. Res., 6 253, 1964.

V-Cillin K®

Lilly 700867

Potassium Phenoxymethyl Penicillin

(See next page for prescribing informatio

New 500 mg. tablets...a more convenient way to give high doses

Description: V-Cillin K is the potassium salt of V-Cillin® (phenoxymethyl penicillin, Lilly). This chemically improved form combines acid stability with immediate solubility and rapid absorption. Higher serum levels are obtained more rapidly with this penicillin than with equal oral doses of penicillin G. The higher serum levels and acid stability of V-Cillin K make it a more dependable penicillin for oral use.

V-Cillin K, Pediatric, is an oral solution of clinically proved V-Cillin K in teaspoon dosage form. When mixed as directed, each 5 cc. (approximately one teaspoonful) will contain 125 mg. (200,000 units) phenoxymethyl penicillin as the potassium salt.

Indications: V-Cillin K has been shown to be effective in the treatment of streptococcus, pneumococcus, and gonococcus infections as well as infections caused by sensitive strains of staphylococci. It may be used for the prophylaxis of streptococcus infections in patients with a history of rheumatic fever and for the prevention of bacterial endocarditis after tonsillectomy and tooth extraction in those patients with a history of rheumatic fever or congenital heart disease.

Contraindication: V-Cillin K should not be administered to a patient with a history of penicillin hypersensitivity.

Warnings: In rare instances, the use of penicillin may cause acute anaphylaxis which may prove fatal unless promptly controlled. This type of reaction appears more frequently in patients with a history of sensitivity reactions to penicillin and in those with bronchial asthma or other allergies. Resuscitative drugs should be readily available for emergency administration. These include epinephrine and pressor drugs (as well as oxygen for inhalation) for relief of immediate allergic manifestations and antihistamines and corticosteroids for delayed effects.

Precautions: V-Cillin K should be used cautiously, if at all, in a patient with a strongly positive history of allergy.

In prolonged therapy with penicillin, and particularly with high parenteral dosage schedules, frequent evaluation of the renal and hematopoietic systems is recommended.

In suspected staphylococcus infections, proper laboratory studies (including sensitivity tests) should be performed.

The use of penicillin may be associated with the overgrowth of pencillin-insensitive organisms. In such cases, its administration should be discontinued, and appropriate measures should be taken.

Adverse Reactions: Although serious allergic reactions are much less common with administration of oral penicillin than with intramuscular forms, manifestations of penicillin allergy may occur.

Penicillin is a substance of low toxicity, but it does possess a significant index of sensitization. The following hypersensitivity reactions associated with the use of penicillin have been reported: skin rashes ranging from maculopapular eruptions to exfoliative dermatitis; urticaria; and reactions resembling serum sickness, including chills, fever, edema, arthralgia, and prostration. Severe and often fatal anaphylaxis has occurred (see Warnings). Hemolytic anemia, leukopenia, thrombocytopenia, and nephropathy are rarely observed side-effects and are usually associated with high parenteral dosage.

Administration and Dosage: For Tablets V-Cillin K and for V-Cillin K, Pediatric, the usual dosage ranges from 125 mg. (200,000 units) three times a day to 500 mg. (800,000 units) every four hours. For infants, the daily dosage may be 50 mg. per Kg. of body weight divided into three doses.

Beta-hemolytic streptococcus infections without associated bacteremia may be treated with 200,000 to 400,0000 units three times a day. Therapy should be continued for a minimum of ten days to prevent development of rheumatic fever and/or other serious complications. Dosage for routine streptococcus prophylaxis in patients with a history of rheumatic fever or congenital heart disease may be 200,000 units once or twice daily. When such patients undergo tonsillectomy, tooth extraction, or other minor surgery, the prophylactic dose should be 500,000 units every six hours given two days prior to surgery and for two days postoperatively. If oral medication is not feasible on the day of surgery, parenteral therapy should be considered. Mild to moderately severe pneumococcus pneumonia has been treated effectively with 250 mg. every six hours.

In staphylococcus infections, 400,000 units or more should be given every six to eight hours in conjunction with indicated surgical procedures.

For gonorrhea in males, 500 mg. (800,000 units) every four hours for three doses may be employed; in females, 500 mg. every four hours for six doses are recommended. Refractory infections generally respond to a second treatment three to four days following completion of the first. Treatment of gonorrhea with severe complications should be individualized, with prolonged and intensive treatment. Patients with a suspected lesion of syphilis should have a dark-field examination before receiving penicillin and monthly serologic tests for a minimum of three months.

How Supplied: Tablets V-Cillin K, U.S.P., 125 mg. (200,000 units), in bottles of 50 and 100; and 250 mg. (400,0000 units) and 500 mg. (800,000 units), in bottles of 24 and 100.

V-Cillin K, Pediatric, for Oral Solution, 125 mg. (200,000 units) per 5 cc. of solution, in 40, 80, and 150-cc.-size packages. [032067]

Additional information available to physicians upon request. Eli Lilly and Company, Indianapolis, Indiana 46206.

Lilly

700867

Carolina is the goal uppermost in the minds of everyone connected with the Medical College of South Carolina.

Plans are underway to meet the demands of the people of the state for increased health care by enlarging the number of students per class in some fields and by offering new programs to fill other needs.

Within the next few years there will be an increase of 20 physicians per year bringing the total to 102 students for each class of the four years required to earn an M.D. degree. In the fall of 1967 the School of Dentistry will admit its first class of 24 students who will be ready to offer care to residents of the state in 1971. Within a few years there will be 48 dentists graduating each year.

A new degree program for nursing students will admit 60 students in the fall of 1967 and will eventually expand to provide 75 new nurses each year. The School of Graduate Studies is increasing its enrollment each year; through its programs more teachers in the basic sciences will be trained to insure a continuing supply for all the schools in the state which have professional programs in the health sciences. A stepped-up academic training program for pharmacists is also planned for the near future.

The recently organized School of Allied Health Sciences is already offering training for para-medical personnel, the technicians, technologists, and therapists, that have become an essential part of modern medicine. It is expected this School will serve as a focal point in South Carolina for training of these auxiliary personnel. Many of the courses require less than two years for completion, and their graduates will be serving the state in the near future.

Much of this expansion has been made possible by the support of the General Assembly for two new buildings on the Medical College campus. Construction is expected to begin in December on a 3-story administration-library building and a 7-story dental school-basic sciences building. A $8.25 million grant received from the U. S. Department of Health, Education, and Welfare in December together with matching funds appropriated by the General Assembly in 1965 made construction possible. Earlier support from the General Assembly facilitated the acquisition of the Porter Military Academy property north of the Medical College Hospital. It will be utilized in this new construction and for future development.

Another educational goal for the Medical College is the continuation and further development of a strong program of post-graduate education. Members of the faculty travel throughout the state presenting lectures and short courses for members of local medical and dental societies. An increasing number of post-graduate seminars and refresher courses are being held on the Medical College campus each year for specialized groups. Participation by Medical College faculty in educational television programs, which are seen across the country, has been nationally recognized for its excellence.

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50 YEARS AGO

The Journal
of the
South Carolina Medical Association

August 1917

A long list of physicians examined for the Medical Officers Reserve Corps was published.

Spartanburg County Hospital was in the planning stage.

Dr. M. H. Wyman of Columbia urged measures to control venereal disease.

DOCTORS IN THE NEWS

Dr. Paul W. Sanders, Jr. and **Dr. Paul W. Sanders, III** attended a recent meeting in New York of the American Urological Association. Dr. Sanders, III was elected to membership in the society. He also was elected to the Society of Pediatric Urology, being the first urologist in South Carolina to qualify for election. The Christie Pediatric Group announces the association of **John P. Matthews, Jr., M. D.** in the practice of pediatrics at 13 Medical Court, Greenville. **Dr. Paul Leslie Stuck** has joined the Finger Clinic group in Marion, S. C. with practice limited to obstetrics and gynecology. **Dr. Joel Dekle** has joined **Dr. S. A. Greenberg** of Florence in the practice of medicine. **Dr. Hugh E. Vincent, Jr.** of Anderson has been elected president of the Anderson Medical Society. His wife has been elected president of the Anderson Medical Auxiliary. **Dr. Thomas Brockman** was recently re-elected as a member of Greenville City Council. **Dr. Robert E. Foster** of Bamberg and **Dr. Robert S. Solomon** of Moncks Corner have been elected to active membership in the American Academy of General Practice. **Dr. Ralph R. Coleman** and **Dr. Haskell S. Ellison** announce the association of **Dr. Alexander W. Demasi** in the practice of internal medicine at 122 Bull Street, Charleston. **Dr. E. Y. Smith, Jr.** of Charleston has been certified by the Sub-specialty Board in Pulmonary Diseases of the American Board of Internal Medicine.

At a recent meeting for the election of officers of the Columbia Medical Society **Dr. D. Strother Pope** was elected president-elect; **Dr. George W. Brunson,** vice-president; **Dr. Foster Marshall,** secretary; **Dr. Daniel W. Davis, Jr.,** treasurer, and **Dr. Donald E. Saunders, Jr.,** editor of The Recorder. **Dr. John E. Holler** is the current president.

ERRATUM

Dr. Larry Craig, 33, a native of Anderson, who died in April, was graduated from the Medical College of South Carolina, class of 1958, not the School of Medicine at Emory.

Blue Cross - Blue Shield of South Carolina

Representatives with special training are now available to provide assistance or instruction whenever a Physician or a member of his staff needs information regarding claims, payments, benefits or any other areas concerning Blue Cross - Blue Shield and the programs we administer, including Medicare.

If you have a change in office personnel, upon request, one of these Physician Relations Representatives will visit your office and instruct your new secretary or insurance clerk in basic Blue Shield and Medicare procedures.

We hope that this service of Blue Cross-Blue Shield will be beneficial to you and your office staff. A Representative has been assigned to serve each District: Charleston, Columbia, Greenville, and Florence. You may contact the Representative for your District by calling your District Office, or the Physician Relations Department of the Home Office in Columbia.

Addresses and telephone numbers of these offices follow:

Charleston District Office
Blue Cross - Blue Shield of S. C.
Box 2127, Station A
Charleston, South Carolina
(Telephone: 723-7121)

Columbia District Office
Blue Cross - Blue Shield of S. C.
709 Saluda Avenue
Columbia, South Carolina
(Telephone: 256-0546)

Florence District Office
Blue Cross - Blue Shield of S. C.
Box 886
Florence, South Carolina
(Telephone: 662-0326)

Greenville District Office
Blue Cross - Blue Shield of S. C.
P. O. Box 10287 Federal States
Greenville, South Carolina
(Telephone: 233-1691)

Home Office
Blue Cross-Blue Shield of S. C.
Drawer A, Forest Acres Branch
Columbia, South Carolina
(Telephone: 782-8010)
(Physician Relations Department)

A FUNNY THING HAPPENED WHILE SOUTH CAROLINA WAS ON THE WAY TO ESTABLISHING A SECOND MEDICAL SCHOOL TO AVERT THE IMPENDING DOCTOR CRISIS

HAROLD E. JERVEY, JR., M. D.

Columbia, South Carolina

It is not my intention to debate the pros and cons of the many problems in the development of an additional medical college in South Carolina. Most of these have been settled—only the simpletons fail to recognize that the basic questions have been answered. Emblazoned across the sky is the statistical fact that we have one of the lowest physician-patient ratios in the country. Even people in Hawaii know this, because we've told them. It is also true that we are equally low in per capita income. Even the Eskimos know this. However, this is purely coincidental. The entire world knows that doctors aren't interested in money. How do they know? We've told them. However, we've established mathematically that South Carolina has a need and in like manner proved that it has little attraction.

We've been told by authorities that financing is no problem. Just get yourself a pick and shovel and start digging. There's gold in them thar hills, man. All you got to do is start digging. Faculty staffing can be had by shaking hard on almost any tree. Anatomists will drop from some; physiologists, from others. They're just hanging there ready to fall into your arms. They might bear a strange resemblance to Tarzan's foster mother, but didn't we all once upon a time? The fact that 10 to 20 per cent unfilled positions exist in medical schools across the country in any one year proves only two things. The positions aren't worth having, or the administrations have discriminatory policies! (They are prejudiced against professors who resemble Tarzan's foster mother.)

We know that South Carolina has one of the largest applicant pools in the country. Statistics show that we have about as many illiterates as you're likely to find most anywhere. They need educating and they've got potential. Everybody says so. It presents a real challenge. The rewards will be great. With local, home-grown, until now undeveloped talent, anxious to be molded into medical doctors who, incidentally may bear a strange resemblance to Tarzan's foster mother, there will be no difficulty getting medical coverage for the Ridgeways, Mayesvilles, Harleyvilles, and all the other "villes" in South Carolina. The distribution problem which has been extracting its toll from the finest brains in the country for years will be solved. The fact that no other states might accept these fine doctors will prove only one thing—they are prejudiced against doctors who bear a strange resemblance to Tarzan's foster mother. With the important aspects of the case disposed of, let's move on to facets of the problem which are not too important, but might cause a couple of funny things to happen.

The hue and cry in the 1930's was what to do with the surplus of existing doctors. If the schools persisted in turning out physicians at the rate they were, a high percentage were going to be selling apples on street corners, or driving taxi cabs. Serious discussions were entered into by the AMA's Council on Medical Education and Hospitals on means to curtail the outflow. One of many proposals was to close down schools in the less-populated and lower-income areas—namely the South. With an improvement in the economy this decision did not have to be faced and doctors once again were in demand. And by sheer coincidence there was money to be made practicing medicine, but this had nothing to do with the need for more physicians.

In the 1950's statisticians and bureaucrats, aided and abetted by well-meaning medical leaders, concluded that with the population explosion, a severe and critical shortage of doctors was just over the horizon. To meet the minimum demands of the nation, at least fifteen additional schools would have to be developed by 1875. Fortunately for the patients, this number of schools will probably be functioning by that date. Now one hears more and more of the crisis occurring in the 1980's. The reasons for this change in date are difficult to establish and seem to boil down to the advocators' wishful thinking that this strengthens their argument, namely that more doctors who don't bear a resemblance to Tarzan's foster mother are needed. Is it influenced by the certain knowledge that none of us knows what the future holds; that the 1930's clearly show how far our projections can be off, and that other developments of the past ten years might influence this course of events? Just consider—

In 1965 eleven hundred foreign physicians were licensed to practice medicine in this country. This is equivalent to the output of eleven ordinary-sized medical colleges. In addition, several hundred others without full licenses entered this country to engage in internships, residencies, institutional work, and other similar medical activities. No one in the fifties visualized that this number of foreign doctors would be available at this time to practice medicine in the U. S. A. Without building a single new school, from this one source alone, we received in 1965 the equivalent output of fifteen schools. However, the cry of impending crisis persists. Did they mean we needed fifteen new schools or thirty? Is it like the computers that keep dunning you long after you've paid your bill in full?

Another funny thing happened in the fifties. To avert the population explosion, planned parenthood societies sprang up all over the country. Psychological warfare ensued from newspapers, magazines, television, governmental figures up to and including the President of the U. S. A. which purported to make sinners of anyone who presumed to have more children than they could pamper and spoil. Just as one is paid by the government to place land in the soil banks, proposals were discussed to reimburse citizens for not having children and to punish those who had too many (except for high officials). Fortunately science came to the aid of the oppressed at this time with the advent of the "pill" and the "IUD's". The bureaucrats are now taking a long hard look at their figures, and cautiously suggesting that maybe this population explosion may not occur—at least to the heights previously predicted. Does this play a part in the change of target dates for the medical crisis?

The science of electronics and related technology has mushroomed beyond anyone's wildest expectations. Knowledgeable men, with the ability to foresee and predict future developments in this area are voicing quietly the thought that in only a few years a single physician will be able to examine, diagnose, and treat many times the number of patients he sees today and do it more economically and efficiently. These thoughts are being heard more and more frequently at national medical meetings.

History clearly demonstrates that nature has its own set of checks and balances. Man's difficulty stems from his living at one point in time and attempting to project into the future while relating only to the things of the present. These reference points change and today's logical conclusions determined by facts of the present become invalid and no longer logical with changing conditions. From what has been presented is it presumptuous to predict that there will be no overwhelming population explosion; that new techniques enabling the physician to work more efficiently will more than offset it and with the influx of foreign physicians no crisis of doctors will occur? Present trends would indicate that if serious shortages will exist, it will be in paramedical personnel, as is already developing. It wouldn't be funny at all if South Carolina, on its way to meeting the great crisis of tomorrow, discovered there was none to meet!

Will an additional medical school or schools correct the statistical shortage of physicians that exists in South Carolina today? We are a most attractive state. Ask any South Carolinian! Of course, Northerners may call us "provincial"; statistics may show we're near the bottom in every category, but we rank at the top in pride and highway deaths. We have unrecognized assets and potential. Our newspapers proclaim daily it IS SO.

How well do we compare to the areas in which doctors are desirous of locating? Biased surveys reveal that physicians settle in areas where the medical climate is good (this includes many things), where family conditions are attractive (schools, churches, cultural activities, etc.), recreational facilities are available and the economic level is high. (Where they can expect a reasonable amount of money without excessively long hours.) For some the caliber of patient whom they might expect to see might be a factor. They don't really mind if the medical school faculty and the students bear a resemblance to Tarzan's mother, I was only kidding! Other reasons could be presented such as research opportunities, etc., but these probably cover the more important ones. Is this fact or fancy?

In the foreign medical graduate area, with ten thousand taking the ECFMG screening examination last year, it seems likely. England, which has excellent medical schools, has been exporting hundreds of physicians to this country and other sections of the world in the past ten years. They are graduating a sufficient number for their needs, but after the government has expended thousands of dollars on their educations they leave. England is producing physicians for the U. S. A. and they aren't very happy about it. High level governmental discussions have been taking place to explore means to stop the "Brain Drain." Other European countries are equally concerned and in recent months the news media has taken up the cry. This has occurred because doctors are going to try to live and practice in areas which are attractive to them. Until the European economic, political and medical climate improves they will continue to export physicians unless laws are passed preventing their leaving.

So this is Europe and any fool would recognize the advantage of living in the U. S. A. What has this to do with South Carolina? Just glance around you at a state close at hand—Florida! Although this is the only state in the union which has a highly refined obstacle course which one has to pursue before being licensed, is known as the Great Barrier Reef and also attempts to discourage physicians from settling there, its problem is not a shortage, but a surplus! Did it occur to anyone that the majority of these physicians who are breaking their necks to get licensed in Florida have to drive through the eighth wonder of the world — South Carolina, on their way to paradise? Why don't they stop? South Carolina has a shortage and wants them. Florida has a surfeit and doesn't want them. If Florida never went to the expense of running a medical school they would still have more than they could handle. Is it just because of the contrariness of physicians? Tell them that you don't want them, raise the barriers and their adrenalin is discharged, their hackles bristle and they take up the challenge. This is certainly not true with the majority. They are attracted by what they believe to be ideal or at least desirable practice conditions. Florida may not be the most typical example, but the same thing could be said to a lesser degree for many other states. On the other side of the ledger, states such as North Dakota are losing physicians. From the documented migratory habits which scientific surveys have shown, it is clearly established that physicians will gravitate to areas where they feel that ideal practice and living conditions exist and leave those which are less appealing. So wouldn't it be funny if South Carolina, after breaking its financial back, began graduating all of these potential Oslers (who bore a strange resemblance to Tarzan's foster mother), only to have them leave and practice elsewhere? It wouldn't be our first experience. For years many of our state's most-talented and best-educated young people have been seeking their fortunes elsewhere. The argument might be presented that what we do for industry and science should be also done in medicine. In fairness to all—can we afford not to?

So—what great light has been shed on the problem? In my judgment we should proceed cautiously with less emotion and more careful study of the facts. This latter is difficult to obtain in some areas as one can find authorities who will maintain anything; even that in their experience doctors who bear a strange resemblance to Tarzan's foster mother make the best physicians. No one can tell you what the ideal doctor-patient ratio should be. Maybe South Carolina has the ideal and everyone should be trying to emulate us. At any rate the over-riding, preempting factor concerns itself with building South Carolina's economic and educational base and thereby making it more attractive for workers and professional people. This is exactly what our state political leaders are attempting to do and with some success. Until this occurs the development of six additional medical schools will not materially correct the alleged doctor shortage except in a most limited way. We will not be able to keep them in the state and we'll be exporting a most expensive commodity which we can ill afford to do. The facts are available for anyone to see. Their interpretation is open to debate.

In summation, the question has been raised that perhaps no critical shortage of physicians will occur in the foreseeable future. The idea has been presented that if the need for additional physicians is so urgent, the quicker and less expensive method is to attract them from other areas as some states do. I have submitted that it is more economical to erect large and seductive billboards at every highway entering the state proclaiming the virtues of South Carolina and its desperate need for physicians. Perhaps a few could be trapped on their way to Florida. These thoughts which have been expressed indicate that funny things might happen if South Carolina develops another medical school at this time. One point should be clarified in conclusion. I have no antipathy toward professors, students, or practicing physicians bearing a strange resemblance to Tarzan's foster brethren. Even though I vigorously oppose the idea that my physiognomy is similar, I must confess certain traits in me and my colleagues present themselves at times which make me highly suspicious that we are not as far removed in time as we might wish.

Experience With Isoniazid Prophylaxis in a Large City Health Department—L. I. Steinfeld and S. C. Cohen. Dis Chest 51:406-411 (April) 1967.

Isoniazid prophylaxis therapy has been used in over 1,000 patients at the tuberculosis clinics of the Boston Health Department during the past seven years. Four hundred forty-two patients who have completed their course of therapy have been followed for an average of three years. The majority of patients received two years of daily isoniazid therapy at a dosage of 10 mg/kg/body weight. To this date, no case of clinically active tuberculosis has appeared among the 1,000 patients under observation. This experience strongly suggests both a short-term prophylactic effect and a long-term lasting effectiveness of isoniazid prophylaxis.

FACTS COUNT

IN PLANT SITE SELECTION

facts count, too, in selecting health care coverage

Companies selecting South Carolina sites for new plants invested over half a billion dollars on new manufacturing facilities in 1965, more than double the previous year's record. This brings the new industrial investment figure for the past six years to a high of nearly two billion dollars. During this period, well over 100,000 new job opportunities were created in South Carolina.

Many facts count for companies in selecting plant sites. A ready labor market, low utility costs, favorable tax rates, and the total cultural environment of the area are some of the facts that count for companies coming to the Palmetto State.

Facts about health care coverage count for companies when they review employee benefits. Some 2,500 South Carolina companies have already made the facts count. They have chosen Blue Cross and Blue Shield. It's the realistic health care program because coverage is based on the actual care required for recovery. Another fact that counts for new as well as long-time South Carolina industries . . . dues are determined by the health care needs of South Carolinians.

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New Pharmaceutical Specialties

by Paul De Haen

For detailed information regarding indications, dosage, contraindications and adverse reactions, refer to the manufacturer's package insert or brochure.

Single Chemicals—Drugs not previously known, including new salts.

Duplicate Single Products—Drugs marketed by more than one manufacturer.

Combination Products—Consisting of two or more active ingredients.

New Dosage Forms—Of a previously introduced product.

NEW SINGLE CHEMICALS

MAOLATE

Muscle Relaxant—General. Rx

Manufacturer: The Upjohn Company

Nonproprietary Name: Chlorphenesin carbamate

Indications: Strains, sprains, and direct trauma involving the neck, back and joints; disc syndrome; synovitistendinitis; fibromyositis-myositis; osteoarthritis; rheumatoid arthritis.

Contraindications: During pregnancy, in children, and in patients who have demonstrated evidence of hypersensitivity to it.

Dosage: One tablet, 4 times daily, up to two tablets 3 times daily.

Supplied: Tablets—400 mg; bottles of 50 and 500.

DUPLICATE SINGLE PRODUCTS

SOPOR

Hypnotics & Sedatives—Nonbarbiturate. Rx

Manufacturer: Arnar-Stone Laboratories

Nonproprietary Name: Methaqualone

Indications: To provide sleep and daytime sedation.

Contraindications: Severe hepatic impairment, during pregnancy, and children under 14 years of age.

Dosage:

For sleep—150 to 300 mg before retiring.

For sedation—75 mg after each meal and at bedtime.

Supplied: Tablets—150 mg; bottles of 100, 500, 1000.

COMBINATION PRODUCTS

NORINYL-1

Progesterone/Estrogen Combination. Rx

Manufacturer: Syntex Laboratories

Composition:

Norethindrone	1.0 mg
Mestranol	0.05 mg

Indications: Oral contraception

Contraindications: History of thrombophlebitis or pulmonary embolism, liver dysfunction or disease, known or suspected carcinoma of the breast or genital organs, undiagnosed vaginal bleeding.

Dosage: One tablet daily for 20 days, beginning on day 5 of the menstrual cycle.

Supplied:

Dispensers—20 and 60 tablets.

Bottles—250 tablets.

VITAMIN B COMPLEX w/VITAMIN C

Vitamin Combination—Other. Rx

Manufacturer: Wyeth Laboratories

Composition:

Thiamine HC1 (B_1)	10.0 mg
Riboflavin (B_2)	2.5 mg
Niacinamide	50.0 mg
Pyridoxine HC1 (B_6)	2.5 mg
d-Pantothenyl Alcohol	2.5 mg
Ascorbic Acid	75.0 mg

Preserved with 2.5 mg phenol and 20.0 mg benzyl alcohol.

Indications: Vitamin B complex and vitamin C deficiencies.

Contraindications: None mentioned.

Dosage: 2 ml i.m., daily.

Supplied: Tubex—2 ml; packages of 10.

DEATH

Dr. L. C. Stukes

Dr. Lionel Chalmers Stukes, 88, of Summerton died July 8.

Dr. Stukes was born in Manning and was active in the medical profession until his death.

MEETINGS

The AMA's 27th Congress on Occupational Health will be held Sept. 25-26 at the Regency Hyatt House, Atlanta, Ga.

Tennessee Valley Medical Assembly will meet October 2-3 in Memorial Auditorium Chattanooga, Tenn. Dr. David P. McCallie of Chattanooga is chairman.

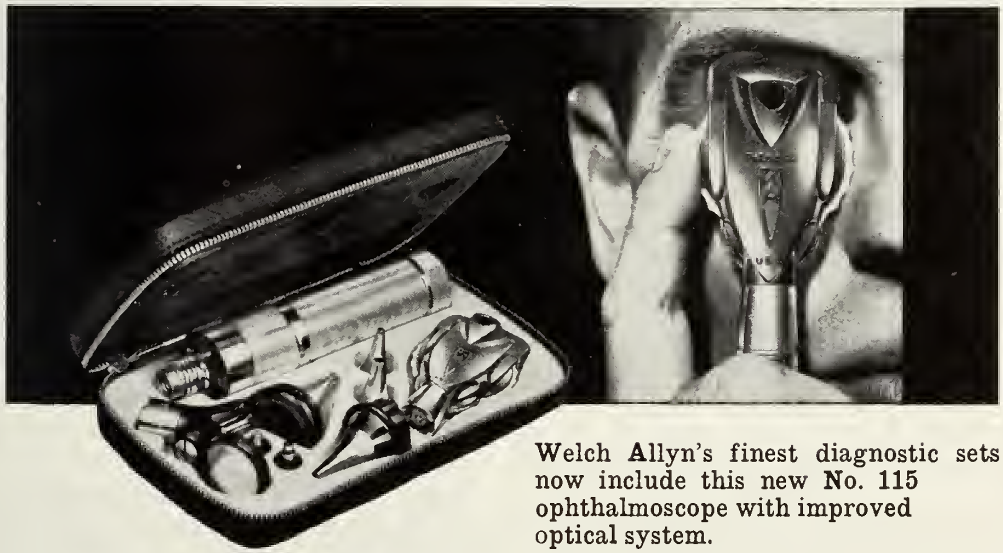
The 1967 Medical Progress Assembly will be held in Birmingham, Ala., Sept. 17-19. The Assembly will be accepted for 14 hours of Category I, A.A.G.P. A host of outstanding speakers are featured in the 10th annual meeting as well as in all three programs being held in conjunction with the Assembly.

The 7th Annual Charlotte Postgraduate Seminar will be held Sept. 27-28 at Presbyterian Hospital Auditorium. 17 hours AAGP credit.

The South Carolina Pediatric Society will have its annual meeting Sept. 8-9 at The Adventure Inn, Hilton Head Island, S. C.

A meeting of the Southeastern Chapter, Society of Nuclear Medicine, is to be held in the Phoenix Hotel, Lexington, Kentucky, Oct. 19-21.

The 19th Annual Scientific Assembly of the American Academy of General Practice will be held Sept. 18-21 in Dallas.



Welch Allyn's finest diagnostic sets now include this new No. 115 ophthalmoscope with improved optical system.

The No. 115 "oph" uses a mirror instead of a prism for light transmission in order to bring the viewing axis and the light projection axis closer to coincidence. With this new system, it is easier to direct the light beam into the eye, a greater area of the eye grounds is visible, and appears to be more brilliantly illuminated.

No new technique is required. Size, shape, lens and aperture selection, and light control are identical with the now discontinued Welch Allyn No. 121 ophthalmoscope. But what a difference in use! May we show you?

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for

- EMPHYSEMA
- ASTHMA
- CHRONIC BRONCHITIS
- BRONCHIECTASIS

The fast-disintegrating uncoated tablet gives relief in 15 minutes

Each tablet contains:

Potassium Iodide .... 195 mg.
Aminophylline .... 130 mg.
Phenobarbital, Caution: May be habit forming... 21 mg.
Ephedrine HCl .... 16 mg.

FEDERAL LAW PROHIBITS
DISPENSING WITHOUT PRESCRIPTION

Precautions: Usual for aminophylline-ephedrine-phenobarbital. Iodides may cause nausea, long use may cause goiter. Discontinue if symptoms of iodism develop.

Iodide contraindications: tuberculosis, pregnancy.

DOSAGE
One tablet, with full glass of water, 3 or 4 times daily.

Dispensed in bottles of 100 and 1000 tablets.

MUDRANE GG—Formula, dosage and package identical to Mudrane—*except*—100 mg. glyceryl guaiacolate replaces the potassium iodide. The value of Mudrane cannot be enjoyed by a small group in which K.I. is contraindicated. Mudrane GG is prepared for this group.

MUDRANE GG ELIXIR—Four 5 cc teaspoonfuls is equivalent to one Mudrane GG tablet. Dosage adjusted to age and weight of child. Mudrane GG Elixir is for pediatric patients and those who think they cannot swallow tablets. Dispensed in pint and half gallon bottles.

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. . . the joy of being back with your child. For some mothers this will never be. For many mentally sick people, even the new treatment methods do not work. More research is needed to find ways to save all the victims of mental illness. Please help this important work. Help speed the day that we'll be rid of mental illness.

Give to the National Association for Mental Health through your local chapter.

NATIONAL ASSOCIATION FOR MENTAL HEALTH
MH

After the picnic even Gramps Was a victim of intestinal cramps

Parepectolin for quick relief of acute diarrhea
...soothes colicky pain with paregoric*
...consolidates fluid stools with pectin
...adsorbs irritants with kaolin,
and protects intestinal mucosa

In elderly patients it is particularly important to stop the diarrhea fast. Parepectolin helps you control diarrhea promptly and gain the patient's confidence until etiology has been determined.

Parepectolin®

Each fluid ounce of creamy white suspension contains:
*Paregoric (equivalent) .... (1.0 dram) 3.7 ml.
Contains opium (¼ grain) 15 mg. per fluid ounce.
warning: may be habit forming
Pectin .... (2½ grains) 162 mg.
Kaolin (specially purified) .... (85 grains) 5.5 Gm.
(alcohol 0.69%)
Usual Adult Dose: One or two tablespoonfuls three times daily.

RORER
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removes the mental blur

that clouds vision

SOLFOTON®

Each tablet or capsule contains
PHENOBARBITAL.............. 16 mg.
(Warning: may be habit forming)
BENSULFOID® (See P D R)...... 65 mg.
Precaution: same as 16 mg. of phenobarbital

Constructive Therapy

A Solfoton tablet or capsule at 6 hour intervals maintains sedation at the threshold of calmness, sustaining a mental climate for purposeful living.

Literature and clinical samples sent upon request.

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Solfoton *(yellow, uncoated tablets "P")*
100s, 500s, 5000s
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Solfoton S/C *(sugar-coated beige tablets)*
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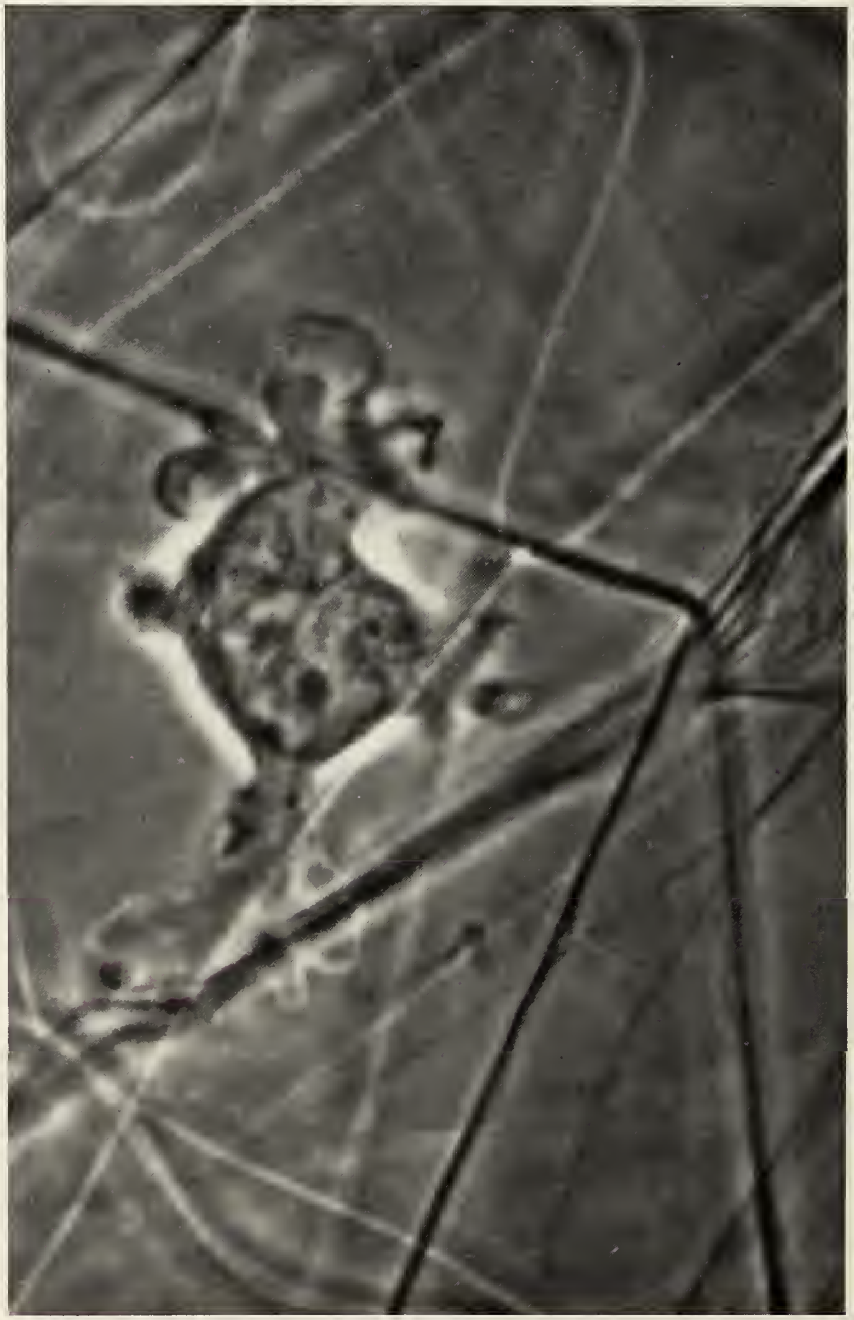
INFLAMMATION:
A cellular fight for life

A SYNTEX REPORT based on recently developed hypotheses about topical corticosteroids, including the cellular theories of inflammation by Thomas F. Dougherty, Ph.D., University of Utah.

You are looking at a fibroblast fighting for life. This cell—one of the most common found in connective tissue—has literally been poisoned by cytotoxins released from other cells that have ruptured. Soon, if the abnormal activity of this fibroblast does not cease, it, too, will rupture and die—one more casualty in the inflammatory wave of destruction precipitated by injury.

Until a short time ago no one had ever witnessed such a scene at the cellular level. Now, through advanced cinemicrographic techniques, it is possible to view and photograph the inflammatory process as produced experimentally in living animal tissue. This method permits new insight into the mechanism of inflammation and the role of corticosteroids in therapeutic management. Equally important, these techniques shed new light on factors that may make one corticosteroid more effective than another—factors that can be correlated with other chemical, biologic, and clinical parameters.

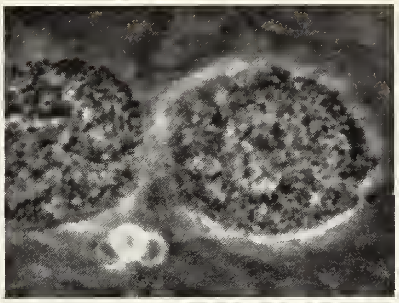


Visual evidence of how corticosteroids influence the inflammatory reaction

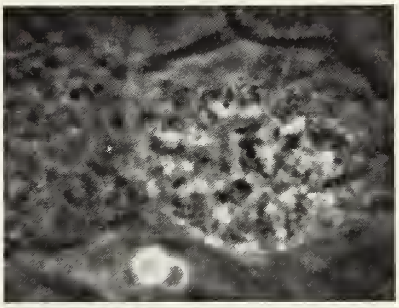
Working with phase-contrast cinemicrography on living animal tissue, Doctors Thomas F. Dougherty and David Berliner of the University of Utah College of Medicine have actually filmed cellular events that occur during the inflammatory reaction. This remarkable study* and additional work by these investigators, as well as by others, have established a new theoretical biologic basis for the antiinflammatory effect of the corticosteroids. (It must be noted that other theories, such as the lysosome or so-called "suicide bag" theory, have been postulated, although it is quite likely that there are more similarities than differences among the various theoretical models.)

The inflammatory wave of destruction

In this investigation an injurious injection of gelatin is used to set off an inflammatory reaction in living mouse tissue. What follows is a wave of destructive cellular activity that comprises the inflammatory response to injury. Mast cells (which contain heparin, serotonin and histamine) take up water, swell and rupture, releasing their contents, which are toxic outside the mast cell wall. These toxins, in turn, cause disintegration of other cells (such as fibroblasts) and the release of additional toxic material. Capillaries, too, take up water and leak unformed blood elements, causing edema. And polymorphonuclears, lymphocytes and perithelial cells invade the inflamed site. As a result of all these changes, the cellular environment reaches a state of turmoil.



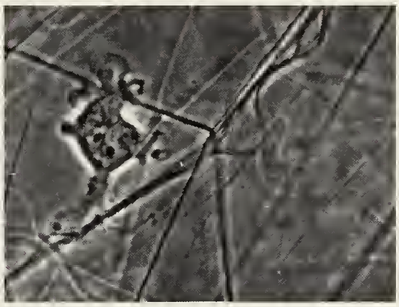
Phase-contrast microscopy showing mast cell before injury.



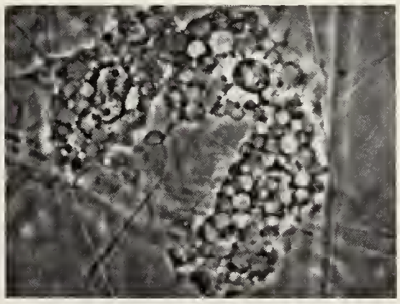
Mast cell (after injury) has broken up and released cytotoxins.

How corticosteroids change the picture

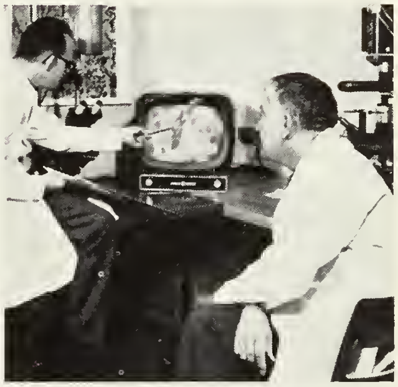
Corticosteroids appear to virtually stop the abnormal cellular activity that constitutes the inflammatory reaction. This permits the body's natural resources to clear up the inflamed area and repair the damaged tissue. This interpretation is supported by the fact that when the injurious gelatin solution is injected simultaneously with a corticosteroid – Synalar (fluocinolone acetonide) – the inflammatory pattern simply does not develop.



Fibroblast in high state of activity, much distorted.



Mast cells showing effects of corticosteroid action: cells are normal in size, shape and activity.



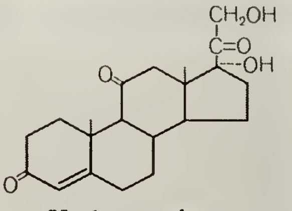
In summarizing his study Doctor Dougherty states: "...we also feel this work may explain why one corticosteroid helps a patient more rapidly and effectively than another. If it does, it is because one corticosteroid is the fastest, most effective inhibitor of the series of inflammatory events at the tissue level."

**A New View of Corticosteroid Action in Inflammatory Dermatoses,* a film based on this study, is now available from your Syntex representative.

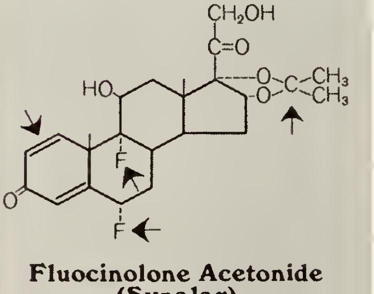
See last page for contraindications, precautions, side effects and dosage.

How advances in chemical design have achieved greater steroid potency

The chemical modification of corticosteroid molecules from the advent of hydrocortisone to the development of Synalar (fluocinolone acetonide) is a prime example of how biochemists can "design" to increase therapeutic activity and minimize undesirable side actions. Below, for example, we see the important changes that were made in reference to the hydrocortisone molecule to produce fluocinolone acetonide, one of the most active of all topical corticosteroids. As a result, a 0.01% preparation of Synalar (fluocinolone acetonide) has been reported to do the work of a 1% hydrocortisone product containing 100 times more cortiscosteroid. And it can often do it more effectively.



Hydrocortisone

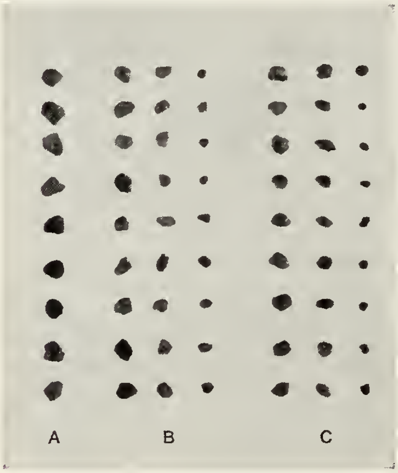


Fluocinolone Acetonide (Synalar)

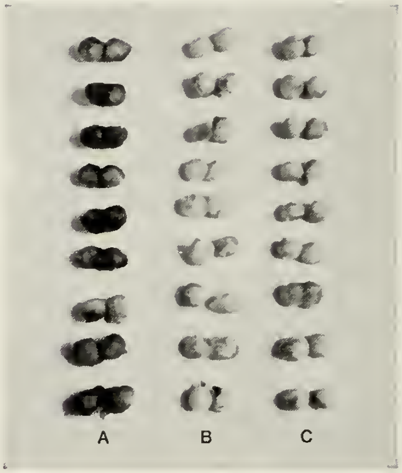
- ☐ *a double bond between carbons 1 and 2*
- ☐ *fluorine substitutions at both the 6-α, and the 9-α positions*
- ☐ *the addition of the acetonide at the 16-α, 17-α positions, thus providing one of the most potent topical corticosteroids available.*

How bioassay tests are used to "predict" therapeutic potential

Biologic assays are another tool used by researchers to help establish the relative activity of corticosteroids. To date no single method of assaying corticosteroid activity has emerged as the ideal "yardstick" for predicting therapeutic potential. Taken together, however, these methods have proved useful. When such tests are run on various corticosteroids, a definite order of corticosteroid activity becomes evident. Compounds with the highest order of activity may be expected to merit clinical trial to establish their high therapeutic potential. When assayed by these methods, fluocinolone acetonide (Synalar) emerges as one of the most active topical corticosteroids, milligram for milligram, available for clinical application today.



The Thymus Involution Assay[1-4] is run on adrenalectomized rats. The sizes of the glands are measured, and the degree of involution caused by the steroid is determined as an indication of its potency. In the above photo, the comparative involution of thymus glands achieved with hydrocortisone and Synalar (fluocinolone acetonide) is shown. Untreated controls (A) show normal size. Group B —injected with 1, 2 and 4 mg. of hydrocortisone—show progressively smaller thymuses as does Group C—injected with fluocinolone acetonide —but with only 1/500th the dose of hydrocortisone.



The Antigranuloma Assay[1-4] also utilizes adrenalectomized rats. Granulomas are induced by subcutaneous implantation of cotton pellets on either side of the thorax. The degree of granuloma inhibition achieved by a steroid reflects its potency. The above photo shows the inhibition of granuloma formation achieved with hydrocortisone and Synalar (fluocinolone acetonide). Untreated controls (A) show large, red granulomas adhering to the pellets. Group B, receiving hydrocortisone and Group C, receiving fluocinolone acetonide, show little, if any, granuloma formation. Fluocinolone acetonide produced the same effect as hydrocortisone with only 1/500th the dose. This assay, as well as the thymus involution assay, measures systemic rather than topical corticosteroid activity. Nevertheless, results by these methods correlate well with other assays and with the milligram potencies of topical steroids in current clinical use.

Worldwide clinical experience confirms the predictable therapeutic potential of Synalar

It is particularly gratifying that the promise of the advanced chemical design and high order of bioassay activity of Synalar (fluocinolone acetonide) has been confirmed by widespread therapeutic application. Indeed, the impressive clinical response rate of Synalar has been documented in no fewer than 232 papers from 22 countries.

Representative Clinical Results with Synalar*

Efficacy Documented in over 4,000 Patients

Condition	Number of Publications	Number of Patients	Significant Improvement†
Contact Dermatitis	27	750	713
Eczematous Dermatitis	21	472	409
Seborrheic Dermatitis	18	442	426
Atopic Dermatitis	24	460	426
Psoriasis	36	1,699	1,510
Neurodermatitis	18	351	324
Total	144	4,174	3,808

*Complete bibliography on request.

†Expressed by the authors as excellent, very good, good, complete remission of inflammation, etc.

PRESCRIBING INFORMATION

For initiation of therapy: Cream 0.025%, 5 and 15 Gm. tubes, 425 Gm. jars; *for emollient effect:* Ointment 0.025%, 15 Gm. tubes; *for maintenance therapy:* Cream 0.01%, 15 and 45 Gm. tubes, 120 Gm. jars; *for intertriginous or hairy sites:* Solution 0.01%, 20 cc. and 60 cc. plastic squeeze bottles; *for infected inflammatory dermatoses:* Neo-Synalar® Cream (0.025% fluocinolone acetonide, neomycin sulfate, equivalent to 0.35% neomycin base), 5 and 15 Gm. tubes. CONTRAINDICATIONS: Tuberculous, fungal, and most viral lesions of the skin, (including herpes simplex, vaccinia, and varicella). Not for ophthalmic use. Contraindicated in individuals with a history of hypersensitivity to any of the components. PRECAUTIONS: Synalar preparations are virtually nonsensitizing and nonirritating. However, the solution may produce burning or stinging when applied to denuded or fissured areas. In some patients with dry lesions, the solution may increase dryness, scaling or itching. While topical steroids have not been reported to have an adverse effect on pregnancy, the safety of their use on pregnant females has not absolutely been established. Therefore, they should not be used extensively on pregnant patients, in large amounts, or for prolonged periods of time. Prolonged use of any antibiotic may result in overgrowth of nonsusceptible organisms; if this occurs, appropriate therapy should be instituted. When severe local infection or systemic infection exists, the use of systemic antibiotics should be considered, based on susceptibility testing. SIDE EFFECTS: Side effects are not ordinarily encountered with topically applied corticosteroids. As with all drugs, however, a few patients may react unfavorably to Synalar under certain conditions. The neomycin in Neo-Synalar Cream rarely produces allergic reactions.

REFERENCES: 1. Lerner, L. J., Bianchi, A., Turkheimer, A. R., Singer, F. M., and Borman, A.: Anti-inflammatory steroids: potency, duration and modification of activities. Ann NY Acad Sci 116:1071 (Aug. 27) 1964. 2. Idem: Comparison of anti-granuloma, thymolytic and glucocorticoid activities of anti-inflammatory steroids. Proc Soc Exp Biol Med 116:385 (June) 1964. 3. Ringler, A.: Activities of adrenocorticosteroids in experimental animals and man, in Dorfman, R. I.: Methods of hormone research, New York, Academic Press, 1964. vol. III. pp. 234-280. 4. Gubersky, V. R.: To be published.

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References: 1. A.M.A. Council on Drugs: *New Drugs* 1966 ed. Chicago: American Medical Association, p. 12. 2. Osol, A.; Pratt, R., and Altschule, M.D.: *The United States Dispensatory,* 26th ed. Philadelphia: J. B. Lippincott Co., 1967, p. 844. 3. Purcell, R. H., and Chanock, R. M.: Role of Mycoplasmas in Human Respiratory Disease. *Med. Clin. N. Amer.* 51:791 (May) 1967.

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Prescribing information
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DECLOMYCIN Demethylchlortetracycline should be equally or more effective than other tetracyclines when the offending organisms are tetracycline-sensitive.

Contraindication: History of hypersensitivity to demethylchlortetracycline.

Warning—In renal impairment, usual doses may lead to excessive accumulation and liver toxicity. Under such conditions, lower than usual doses are indicated, and, if therapy is prolonged, serum level determinations may be advisable. A photodynamic reaction to natural or artificial sunlight has been observed. Small amounts of drug and short exposure may produce an exaggerated sunburn reaction which may range from erythema to severe skin manifestations. In a smaller proportion, photoallergic reactions have been reported. Patients should avoid direct exposure to sunlight and discontinue drug at the first evidence of skin discomfort. Necessary subsequent courses of treatment with tetracyclines should be carefully observed.

Precautions—Overgrowth of nonsusceptible organisms may occur. Constant observation is essential. If new infections appear, appropriate measures should be taken. In infants, increased intracranial pressure with bulging fontanels has been observed. All signs and symptoms have disappeared rapidly upon cessation of treatment.

Side Effects—Gastrointestinal system—anorexia, nausea, vomiting, diarrhea, stomatitis, glossitis, enterocolitis, pruritus ani. Skin—maculopapular and erythematous rashes. A rare case of exfoliative dermatitis has been reported. Photosensitivity; onycholysis and discoloration of the nails (rare). Kidney—rise in BUN, apparently dose related. Hypersensitivity reactions—urticaria, angioneurotic edema, anaphylaxis. Teeth — dental staining (yellow-brown) in children of mothers given this drug during the latter half of pregnancy, and in children given the drug during the neonatal period, infancy and early childhood. Enamel hypoplasia has been seen in a few children. If adverse reaction or idiosyncrasy occurs discontinue medication and institute appropriate therapy.

Average Adult Daily Dosage: 150 mg q.i.d. or 300 mg b.i.d. Should be given 1 hour before or 2 hours after meals, since absorption is impaired by the concomitant administration of high calcium content drugs, foods and some dairy products. Treatment of streptococcal infections should continue for 10 days, even though symptoms have subsided.

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Warning: May be habit-forming.

Precautions: Tuinal should be used cautiously in patients with decreased liver function, since prolongation of effect may occur.

Adverse Reactions: Idiosyncrasy, such as excitement, hangover, or pain, may appear. Hypersensitivity reactions occur in some patients, especially in those with asthma, urticaria, or angioneurotic edema.

Overdosage: C.N.S. depression. Symptoms—Depression of respiration and of superficial and deep reflexes, slight constriction of the pupils (in severe poisoning, dilation), decreased urine formation, lowered body temperature, coma. Treatment—Symptomatic and supportive (gastric lavage; intravenous fluids; maintenance of blood pressure, body temperature, and adequate respiration). Dialysis may speed removal of barbiturates from body fluids.

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Precautions: Limit dosage to smallest effective amount in elderly patients (not more than 1 mg, one or two times daily) to preclude ataxia or oversedation. Advise patients against possibly hazardous procedures until correct maintenance dosage is established; driving during therapy not recommended. In general, concurrent use with other psychotropic agents is not recommended. Warn patients of possible combined effects with alcohol. Safe use in pregnancy not established. Observe usual precautions in impaired renal or hepatic function and in patients who may be suicidal; periodic blood counts and liver function tests advisable in long-term use. Cease therapy gradually.
Side Effects: Side effects (usually dose-related) are fatigue, drowsiness and ataxia. Also reported: mild nausea, dizziness, blurred vision, diplopia, headache, incontinence, slurred speech, tremor and skin rash; paradoxical reactions (excitement, depression, stimulation, sleep disturbances, hallucinations); changes in EEG patterns. Abrupt cessation after prolonged overdosage may produce withdrawal symptoms similar to those seen with barbiturates, meprobamate and chlordiazepoxide HCl.
Dosage—Adults: Mild to moderate psychoneurotic reactions, 2 to 5 mg b.i.d. or t.i.d.; severe psychoneurotic reactions, 5 to 10 mg t.i.d. or q.i.d.; alcoholism, 10 mg t.i.d. or q.i.d. in first 24 hours, then 5 mg t.i.d. or q.i.d. as needed; muscle spasm with cerebral palsy or athetosis, 2 to 10 mg t.i.d. or q.i.d. Geriatric patients: 1 or 2 mg/day initially, increase gradually as needed.
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Contraindications: Infections caused by nonsusceptible organisms; history of penicillin sensitivity.

Warnings: Acute anaphylaxis (may prove fatal unless promptly controlled) is rare but more frequent in patients with previous penicillin sensitivity, bronchial asthma or other allergies. Resuscitative (epinephrine, aminophylline, pressor amines) and supportive (antihistamines, methylprednisolone sodium succinate) drugs should be readily available. Other rare hypersensitivity reactions include nephropathy, hemolytic anemia, leucopenia and thrombocytopenia. In suspected hypersensitivity, evaluation of renal and hematopoietic systems is recommended.

Precautions: In suspected staphylococcal infections, perform proper laboratory studies including sensitivity tests. If overgrowth of nonsusceptible organisms occurs (constant observation is essential), discontinue penicillin and take appropriate measures. Whenever allergic reactions occur, withdraw penicillin unless condition being treated is considered life threatening and amenable only to penicillin. Penicillin may delay or prevent appearance of primary syphilitic lesions. Gonorrhea patients suspected of concurrent syphilis should be tested serologically for at least 3 months. When lesions of primary syphilis are suspected, dark-field examination should precede use of penicillin. Treat beta-hemolytic streptococcal infections with full therapeutic dosage for at least 10 days to prevent rheumatic fever or glomerulonephritis. In staphylococcal infections, perform surgery as indicated.

Adverse Reactions (Penicillin has significant index of sensitization): Skin rashes, ranging from maculopapular eruptions to exfoliative dermatitis; urticaria; serum sickness-like reactions, including chills, fever, edema, arthralgia and prostration. Severe and often fatal anaphylaxis has been reported (see "Warnings").

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The views expressed in this publication are those of the writers and do not necessarily reflect the opinions of the South Carolina Medical Association.

Contributions of Original Articles

Length—Short articles of about 2,500 words (about 8 typewritten pages, double spaced) are preferred. Longer articles ordinarily will defer to the shorter ones in schedule of publication.

Manuscripts—Manuscripts should be typewritten, double spaced, and the original and a carbon copy submitted.

Illustrations—Ordinarily publication of 4 small illustrations or the equivalent accompanying an article will be paid for by The Journal. Any number beyond this must be paid for by the author except under unusual conditions. Illustrations should be sent as glossy prints or graphs in black ink with lettering large enough to show after reduction.

References—Should conform to the following order: surname and initials of author, title of article in small letters, name of periodical, with volume, page, month, day of the month if weekly, and year—e.g.: Lee, G. S.: The heart rhythm following therapy with digitalis, Arch Int Med 44:554, Dec. 1942. They should be listed numerically in order of appearance in the text. Standard abbreviation for journals should be used. Note that periods are not used with these abbreviations as indicated by the Index Medicus. Other abbreviations should also be standard—e. g. mg, ml, Gm.

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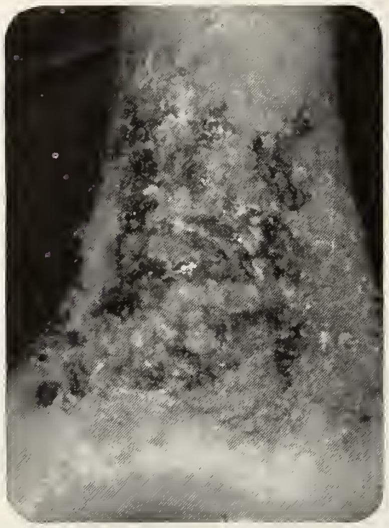
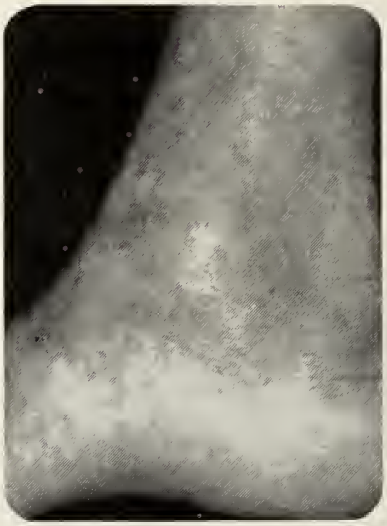


Before treatment



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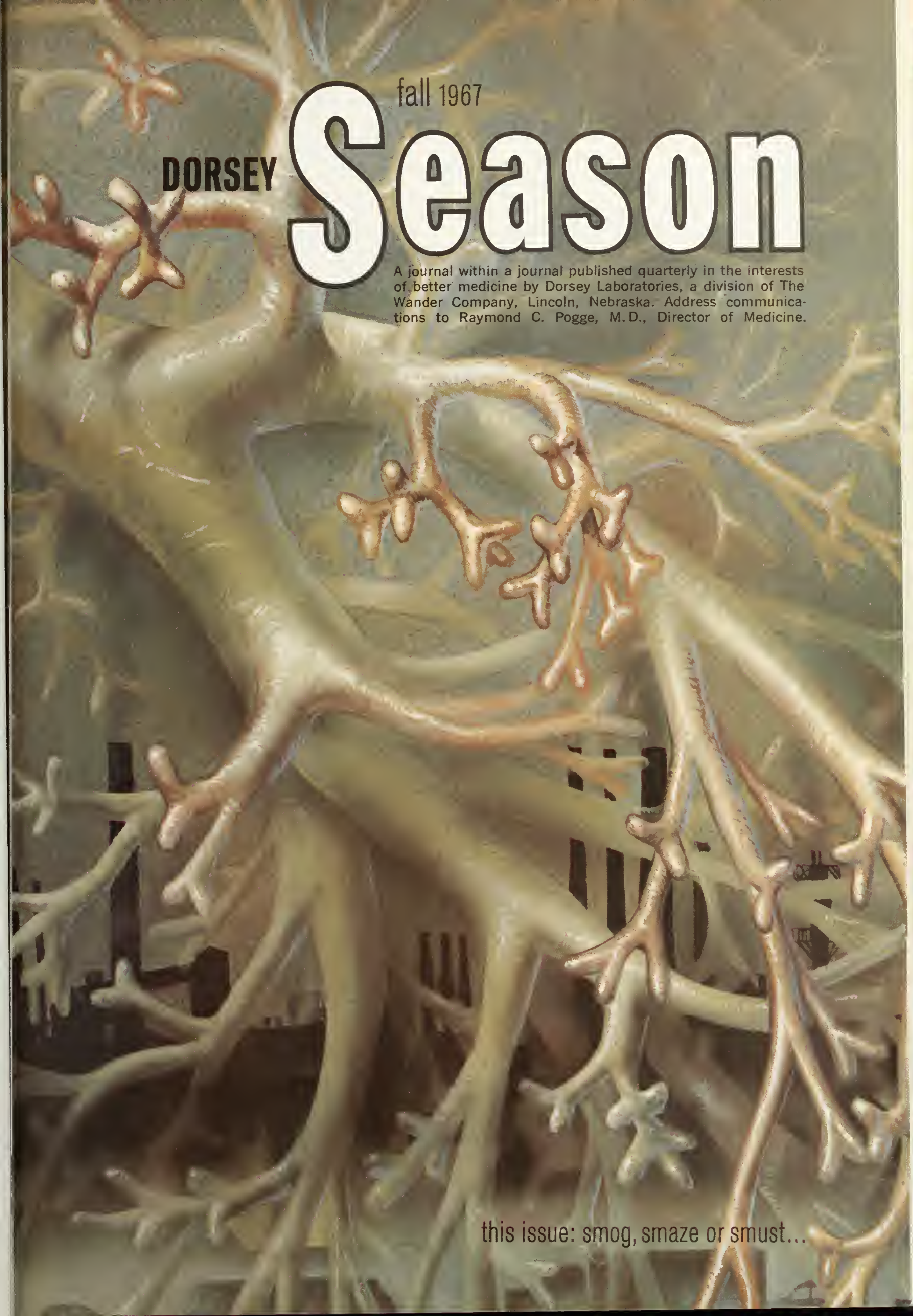

fall 1967

DORSEY Season

A journal within a journal published quarterly in the interests of better medicine by Dorsey Laboratories, a division of The Wander Company, Lincoln, Nebraska. Address communications to Raymond C. Pogge, M.D., Director of Medicine.

this issue: smog, smaze or smust...

Smog, smaze or smust...effects of air pollution on upper respiratory tract

Nathan Flaxman, M.D., Diplomate, American Board of Internal Medicine, Chicago, Illinois

In Los Angeles it is *smog* (smoke and fog). In New York City *smaze* (smoke and haze). In El Paso *smust* (smoke and dust). The original factor was smoke plus such natural phenomena as fog, haze and dust, but air pollution has mushroomed from a smoke problem in our industrial cities into a major economic, esthetic and public health problem that affects practically every American locality and citizen.[1,2] Respiratory disease, of course, is by far the most costly effect of air pollution, for contaminated air can aggravate our illnesses, deplete our strength and shorten our life span.[1]

The greatest problem in dealing with solid wastes is that they are not quickly returned to dust. To aid the decomposing process, the great bulk of such waste is burned, polluting our air in the process.[3] Dr. Jack McKee of the California Institute of Technology[4] has calculated that in Los Angeles County, which has more than six million people, about three pounds of gaseous wastes per person per day (on a dry-weight basis) enter the atmosphere. This is twice as much as solid refuse disposal and six times as much as the contaminants in waste water. It is estimated that in New York City, 730 pounds of pollutants, a little over half the size of a compact two-door sedan of foreign make, is annually thrown into the air for each man, woman and child in the city.[5]

Air pollution is an evident factor, not only in the common cold and upper respiratory disease, but also in chronic bronchitis,[2] pulmonary emphysema,[6] bronchial asthma,[7] pneumonitis and lung cancer.[8] Its effect on the incidence of pulmonary tuberculosis is unproved,[9] although it is conceivable that the presence of various materials polluting the air might do this. A siege of smog in Denver, the "mile high city," in December 1965 was accompanied by respiratory infection that doubled normal absentee rates in schools, factories and city government.[10]

While air pollution is only one factor, it has become important in the causes of most of the afflictions of the respiratory tract. This has been shown not only by the Denver occurrence, but also by detailed study[2] of respiratory illness in a small group of 313 men

from October 1962 to May 1963 when there were 202 episodes involving the upper respiratory tract. The attack rate of illness was related in time to increased concentration of both smoke and sulphur dioxide in the atmosphere of the district in which the men lived.

Other factors often mentioned, include exposure to those who have colds, exposure to extreme changes of temperature, allergy and bacterial infection. However, when low individual resistance due to lack of rest, overwork, fatigue, improper or unbalanced diet, previous illness and emotional stress are included as causes, we enter the realm of somewhat obscure relationships. Much more emphasis can be placed on the role of polluted air.

The symptoms, signs and complications of involvement of the upper respiratory tract, especially the common cold, are the same regardless of the causative factor. Swelling of the lining of the nose, the scratchy dry throat, the discharge from the nose at first watery then thicker, discolored and more tenacious, the eyes tearing, and frequent sneezing are all part of the Number 1 human ailment. Concurrent or residual sinusitis when mucus is trapped there, middle ear involvement due to interference with drainage, laryngitis and bronchitis are complications of the common cold. The primary interference is with a most important function of the nose—the cleansing of foreign matter in the first line of "air defense" to prevent it from entering the breathing tract.

However, the diagnosis and subsequent decision on how to treat the patient so affected rests basically on the relief of symptoms that cause him the misery. The stuffed, runny nose, the clogged ears, and the harsh dry cough—all the symptoms that make common cold sufferers feel miserable and interfere with their sleep—can be alleviated with medications of the oral nasal decongestant/antihistamine combination type. The burning sensation in the throat, soreness of the chest and even chest pain can also be relieved by such medication. Rest in bed if there is fever (but confined to home at least), liberal fluids, uniformly warm surroundings and adequate humidity in the room, are all helpful adjuncts to the medication. Most common cold sufferers recover rapidly and are symptom-free in four to ten days.

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nasal congestion
due to seasonal
allergies and
summer colds

Triaminic® *syrup*

Each teaspoonful (5 ml.) contains:

Phenylpropanolamine hydrochloride	12.5 mg.
Pheniramine maleate	6.25 mg.
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For nasal congestion regardless of cause, you can bring quick, lasting comfort to your little patients with Triaminic Syrup. You may occasionally encounter these side effects: drowsiness, blurred vision, cardiac palpitations, flushing, dizziness, nervousness or gastrointestinal upsets. Precautions: the possibility of drowsiness should be considered by patients engaged in mechanical operations requiring alertness. Use with caution in patients with hypertension, heart disease, diabetes, or thyrotoxicosis.

(Advertisement)

Further treatment, altered by the fact that the affliction hangs on for more than the usual duration of the common cold, requires consideration of allergy, which is most frequently the prolonging factor. But air pollution itself may often be the culprit.

(Concluded on following page)

At the Third National Conference on Air Pollution held recently, it was emphasized that this subject had received more attention in the past four years than in all previous history. Spicer,[11] an active participant at this conference, reiterated that it behooves the practicing physician to be aware of trends in respiratory disease and to accept a major role in community action relating to air pollution and respiratory health. By taking a positive stand physicians have been instrumental in the development of antipollution legislation. An outstanding example is Los Angeles where major steps have been taken by abolishing coal burning, and even banishing oil burning, seven months a year. Natural gas must be used instead and it must be used by industry when available. Backyard incinerators have been abolished in favor of landfill disposal, and building incineration ended except for a few expensive smokeless furnaces.[10] Concerted action can be taken against particular industrial nuisances. One company that disregarded complaints discovered its error when thousands of its credit cards were returned by irate customers who decided to patronize competing companies.[12]

Summary. Respiratory disease is the most important and most costly effect of air pollution, whether termed smog, smaze, or smust. Air pollution is an economic, esthetic and public health problem that affects practically every American locality and citizen. New sources of air pollution are invisible and odorless, but the harmful gases and liquid droplets are there. Triggered by sunlight, some of these undergo mid-air chemical changes and the results are even more irritating to the upper respiratory tract. The symptoms, signs and complications, especially of the upper respiratory tract, can be readily aborted by modern medication but may be unduly prolonged by polluted air. In steps taken to prevent this, the practicing physician can take a major role.

References 1. Anderson, R. J. Air Pollution, Respiratory Disease and the NTA, W. Virg. M. J., 60:332, 1964. 2. Angel, J. H., Fletcher, C. M., Hill, I. D., and Tinker, C. M. Respiratory Illness in Factory and Office Workers, Brit. J. Dis. Chest, 59:66, 1965. 3. Waste Disposal Problems Grow, Current Municipal Problems, 8:218, 1966. 4. McKee, J. quoted by Hills, G. U.S. War at Home-Fight Against Smog, Chicago Tribune, Sept. 26, 1966. 5. NYC Task Force Revives Concern on Air Pollution, Med. Trib. 7:23 (Sept. 17-18) 1966. 6. Flaxman, N. Pulmonary Emphysema, Med. Trial Tech. Quart. 1960 Annual, p. 221. 7. Heimann, H. Air Pollution and Respiratory Disease, Ann. Allergy 21:396, 1963. 8. Flaxman, N. Pneumonitis and Lung Cancer, Med. Trial Tech. Quart. 1965 Annual, p. 185. 9. Flaxman, N. Pulmonary Tuberculosis, Occupation and Trauma, Med. Trial Tech. Quart. 1959 Annual, p. 237. 10. Hill, G. U.S. War at Home-Fight Against Smog, Chicago Tribune, Sept. 26, 1966. 11. Spicer, W. S., Jr. Relation of Air Pollution to Disease, Arch. Environ. Health, 9:600, 1964. 12. Henderson, C. F. What You Can Do To Combat Air Pollution, Parents' Mag. 41:76, 1966.

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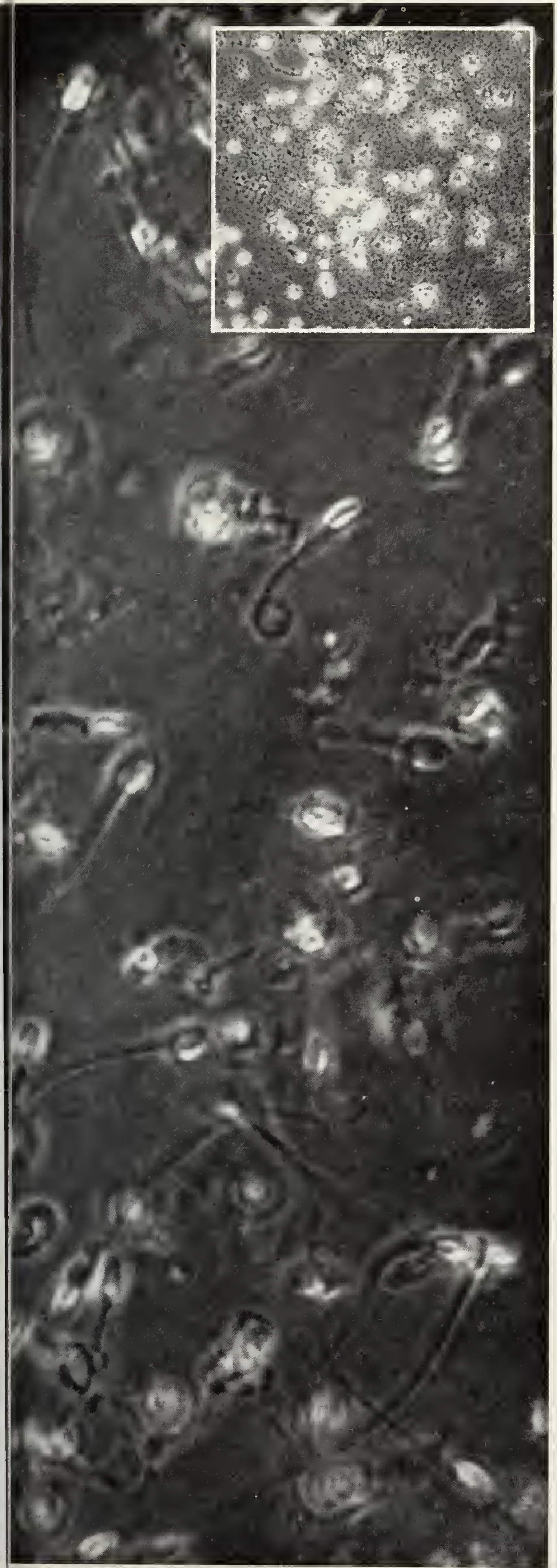


New view of an oral contraceptive at work

Although suppression of ovulation remains the primary mode of action of oral contraceptives, newer knowledge indicates that products like Norinyl-1 — a combination of both low-dosage progestogen and estrogen for the full treatment cycle — may provide multiple action that helps explain their unexcelled record of contraceptive effectiveness. This report explores the possible secondary protective mechanisms offered by combined hormonal administration.

Accumulating evidence has indicated that sparse, highly viscous cervical mucus has a possible adverse effect on the motility and survival of spermatozoa.

The estrogen-opposing progestational ingredient of Norinyl-1 (norethindrone 1 mg. with mestranol 0.05 mg.) changes the usual mid-cycle picture of a thin, watery cervical mucus. The result — a built-in barrier that appears to inhibit sperm from reaching the ovum should one be released. The inset in the adjoining photograph shows immobile spermatozoa as they appear in cervical mucus taken from a patient treated with Norinyl-1.

See last page for contraindications, precautions, side effects and dosage.

How the estrogen-opposing action of Norinyl-1 creates cervical mucus that may be hostile to sperm penetration

Normally, estrogen activity during the fertile midcycle stimulates the production of a profuse and watery cervical mucus that permits maximum sperm motility and promotes penetration.

But what happens when Norinyl-1 is administered? Its potent progestogen, norethindrone, opposes estrogen stimulation of cervical mucus. Consequently, the amount of mucus decreases and its viscosity increases. This results in a sparse but thick mucus barrier that appears to diminish the vitality of the sperm and to impair its powers of penetration.

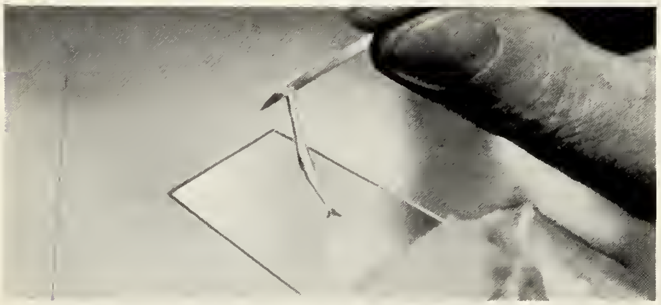
The role of viscous cervical mucus as a secondary action of Norinyl-1

In a report on 89 patients taking this medication,* cervical mucus obtained from cycle day 5 to cycle day 29 appeared scant and thick and exhibited little or no Spinnbarkeit.

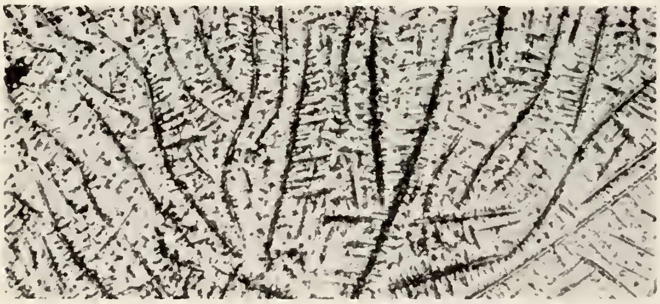
In the opinion of this investigator, the effect on cervical mucus may be sufficient to prevent conception.

*Cohen, M. R.: Symposium: Mechanisms of Action of Low Dosage Oral Contraceptive, Yale University Medical Center, New Haven, Conn., April 6, 1967.

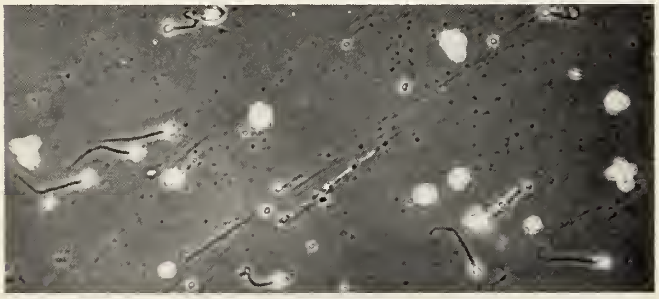
Normal cervical mucus at midcycle in untreated patient is known to permit sperm motility... promote sperm penetration.



Cervical mucus is thin and watery with a stretchability (Spinnbarkeit) of 15 to 20 cm.

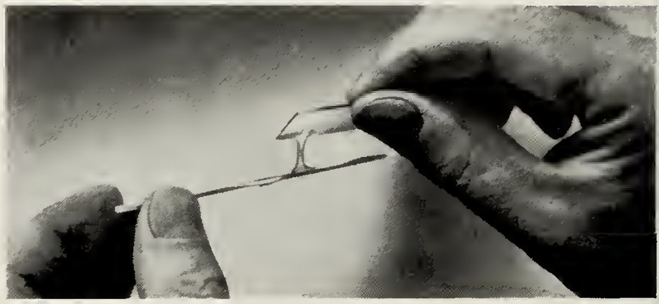


Thin, watery mucus crystallizes into this well-defined, fernlike pattern within a minute.

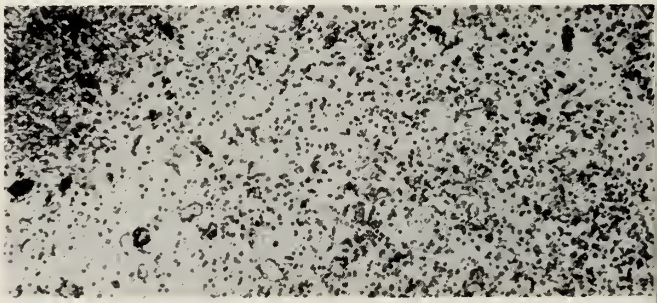


Spermatozoa appear healthy, are active and freemoving.

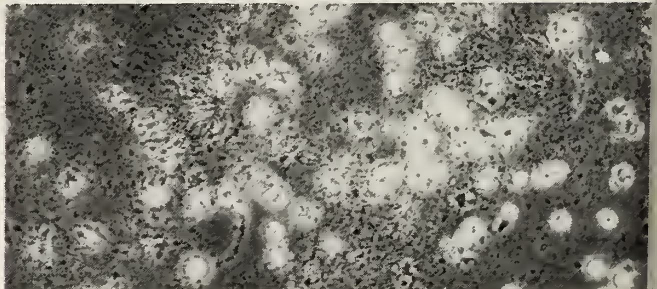
Viscous cervical mucus at midcycle produced by Norinyl-1 appears to impair sperm vitality... inhibit penetration.



Cervical mucus is scanty, thick and viscous. Spinnbarkeit is 1 cm. or less.



In thick, viscous cervical mucus the fern pattern is poorly defined or absent.

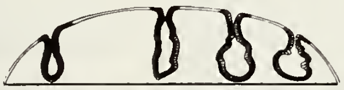


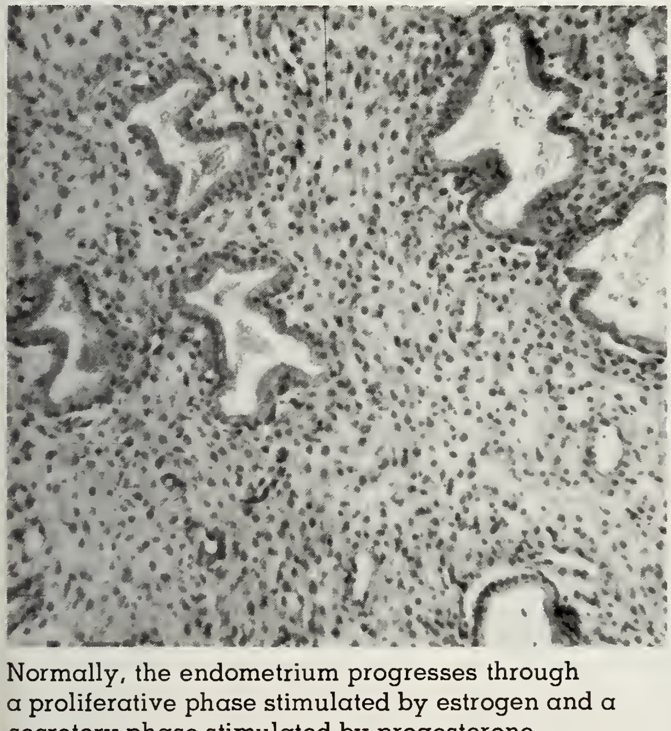
Immobile spermatozoa as they appear in cervical mucus taken from a patient treated with Norinyl-1.

How Norinyl-1 alters normal endometrial responses—another possible protective mechanism

Let us suppose that an ovum is released—as occurs in an occasional, rare case—and somehow a sperm succeeds in penetrating the cervical mucus barrier. Should this come about, one additional action of Norinyl-1 may protect the patient from unwanted pregnancy. The theory is that progestogen intake makes endometrial tissue unreceptive to implantation.

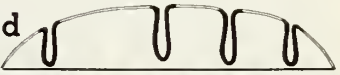
Endometrium of untreated patient

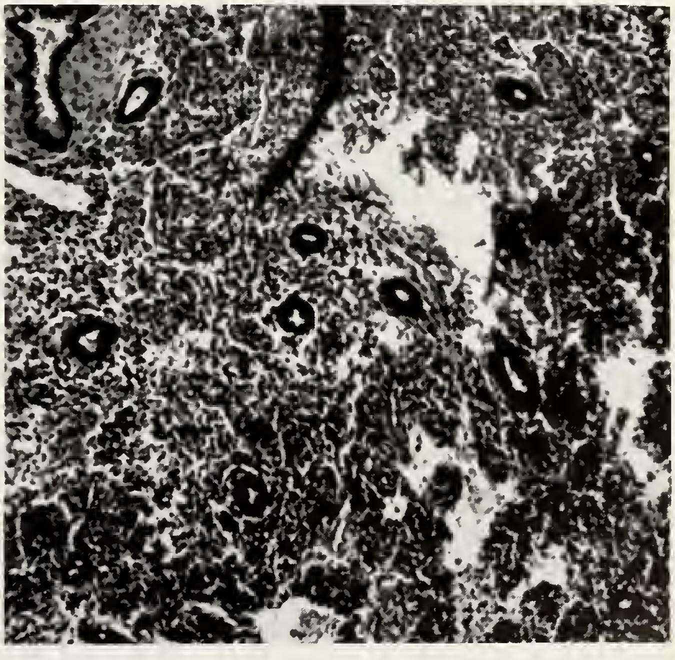




Normally, the endometrium progresses through a proliferative phase stimulated by estrogen and a secretory phase stimulated by progesterone. During the secretory phase the endometrium is receptive to the fertilized ovum.

Endometrium produced by Norinyl-1





When Norinyl-1 is administered its progestogen component—norethindrone—accelerates the secretory phase and suppresses glandular and vascular development.

new Norinyl®-1 tablets

(norethindrone 1mg. $\bar{c}$ mestranol 0.05mg.)

See last page for contraindications, precautions, side effects and dosage.

effective fertility control
on half the previous dosage

maintains ratio
of the established
norethindrone/mestranol
combination

lower cost

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Reduction of oral contraceptive dosage to lowest effective levels has become a well-accepted principle of conservative medical practice. In keeping with this view, Norinyl is now available in a new strength in which *both* norethindrone and mestranol are reduced 50 percent. Studies show that Norinyl-1 achieves fertility control with only 1.05 mg. of combined progestogen and estrogen per tablet.

Norethindrone was first reported for use as a progestational agent in human beings in 1955. Norethindrone 2 mg. with mestranol 0.1 mg., as an oral contraceptive, is currently in use by over 2,000,000 women. Clinical experience now establishes that Norinyl-1 also amply meets the criteria of reliability and safety.*

*Symposium on Low-Dosage Oral Contraception, Palo Alto, Calif., July 15, 1965.

PRESCRIBING INFORMATION

Contraindications: 1. Patients with thrombophlebitis or with a history of thrombophlebitis or pulmonary embolism. 2. Liver dysfunction or disease. 3. Patients with known or suspected carcinoma of the breast or genital organs. 4. Undiagnosed vaginal bleeding.

Warnings: 1. Discontinue medication pending examination if there is sudden partial or complete loss of vision or if there is a sudden onset of proptosis, diplopia, or migraine. If examination reveals papilledema or retinal vascular lesions, medication should be withdrawn. 2. Since the safety of Norinyl-1 in pregnancy has not been demonstrated, it is recommended that for any patient who has missed two consecutive periods, pregnancy should be ruled out before continuing the contraceptive regimen. If the patient has not adhered to the prescribed schedule, the possibility of pregnancy should be considered at the time of the first missed period. 3. Detectable amounts of the active ingredients in oral contraceptives have been identified in the milk of mothers receiving these drugs. The significance of this dose to the infant has not been determined.

Precautions: 1. The pretreatment physical examination should include special reference to breast and pelvic organs, as well as a Papanicolaou smear. 2. Endocrine and possibly liver function tests may be affected by treatment with Norinyl-1. Therefore, if such tests are abnormal in a patient taking Norinyl-1, it is recommended that they be repeated after the drug has been withdrawn for 2 months. 3. Under the influence of estrogen-progestogen preparations, preexisting uterine fibroids may increase in size. 4. Because these agents may cause some degree of fluid retention, conditions that may be influenced by this factor, such as epilepsy, migraine, asthma, cardiac, or renal dysfunction, require careful observation. 5. Although a cause and effect relationship has not been established, Norinyl-1 should be used with caution in patients with a history of cerebrovascular accident. 6. In relation to breakthrough bleeding, as in all cases of irregular bleeding per vaginam, nonfunctional causes should be borne in mind. In cases of undiagnosed vaginal bleeding, adequate diagnostic measures are indicated. 7. Patients with a history of psychic depression should be carefully observed and the drug discontinued if the depression recurs to a serious degree. 8. Any possible influence of prolonged Norinyl-1 therapy on pituitary, ovarian, adrenal, hepatic or uterine function awaits further study. 9. A decrease in glucose tolerance has been observed in a small percentage of patients on oral contraceptives. The mechanism of this decrease is obscure. For this reason, diabetic patients should be carefully observed while receiving Norinyl-1 therapy. 10. Because of the occasional occurrence of thrombophlebitis and pulmonary embolism in patients taking oral contraceptives, the physician should be alert to the earliest manifestations of the disease. A cause and effect relationship has not been demonstrated. 11. Because of the effects of estrogens on epiphyseal closure, Norinyl-1 should be used judiciously in young patients in whom bone growth is not complete. 12. The age of the patient constitutes no absolute limiting factor, although treatment with Norinyl-1 may mask the onset of the climacteric. 13. The pathologist should be advised of Norinyl-1 therapy when relevant specimens are submitted.

Side Effects: The following adverse reactions have been observed with varying incidence in patients receiving oral contraceptives: nausea, vomiting, gastrointestinal symptoms, breakthrough bleeding, spotting, change in menstrual flow, amenorrhea, edema, chloasma, breast changes (tenderness, enlargement and secretion), loss of scalp hair, change in weight (increase or decrease), changes in cervical erosion and cervical secretions, suppression of lactation when given immediately postpartum, cholestatic jaundice, erythema multiforme, erythema nodosum, hemorrhagic eruption, migraine, rash (allergic), itching, rise in blood pressure in susceptible individuals, mental depression.

The following occurrences have been observed in users of oral contraceptives. A cause and effect relationship has not been established: thrombophlebitis, pulmonary embolism, neuroocular lesions.

The following laboratory results may be altered by the use of oral contraceptives: increased bromsulphalein retention and other hepatic function tests, coagulation tests (increase in prothrombin, factors VII, VIII, IX and X), thyroid function (increase in PBI and butanol extractable protein-bound iodine and decrease in T^3 values), metapyrone test, pregnanediol determination.

Other side effects reported to have occurred in association with use of this drug are dizziness, hirsutism, pains in legs, back, chest and abdomen, dysuria, drowsiness, vaginal discharge, libido increased and decreased, eruptions, hypermenorrhea, hypomenorrhea, increased appetite, G.U. infections, varicose veins, abdominal fullness, acne, headache, nervousness, allergies, blurred vision, pain in eyes, and itching in eyes. *For complete clinical data, see package insert.*

Dosage and Administration: 1. One tablet of Norinyl-1 is administered orally for 20 days beginning on day 5 of the menstrual cycle. (Count day 1 of the cycle as the first day of menstrual bleeding.) Repeat this dosage schedule for each cycle. 2. If no menstrual period occurs after a cycle of treatment (20 tablets) in which patient adhered to the schedule, the patient must be instructed to resume taking the Norinyl-1 tablets 7 days after the previous 20-day course was completed. For example, if the last pill of a previous cycle had been taken on a Sunday, then a new cycle of treatment should begin on the following Sunday. 3. In the postpartum woman, it is recommended that the first cycle of treatment should begin on day 5 of the first menstrual cycle. However, Norinyl-1 should not be administered during lactation.

Availability: Norinyl-1 (norethindrone 1 mg. with mestranol 0.05 mg.)—Dispensers of 20 and 60 and bottles of 250 tablets.

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SOURCE: JAMA 186:65 (OCT. 5) 1963.

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BRIEF SUMMARY/**Indications:** Ambar suppresses appetite and helps offset emotional reactions to dieting. **Contraindications:** Hypersensitivity to barbiturates or sympathomimetics; patients with advanced renal or hepatic disease. **Precautions:** Administer with caution in the presence of cardiovascular disease or hypertension. **Side Effects:** Nervousness or excitement occasionally noted, but usually infrequent at recommended dosages. Slight drowsiness has been reported rarely. See package insert for further details.

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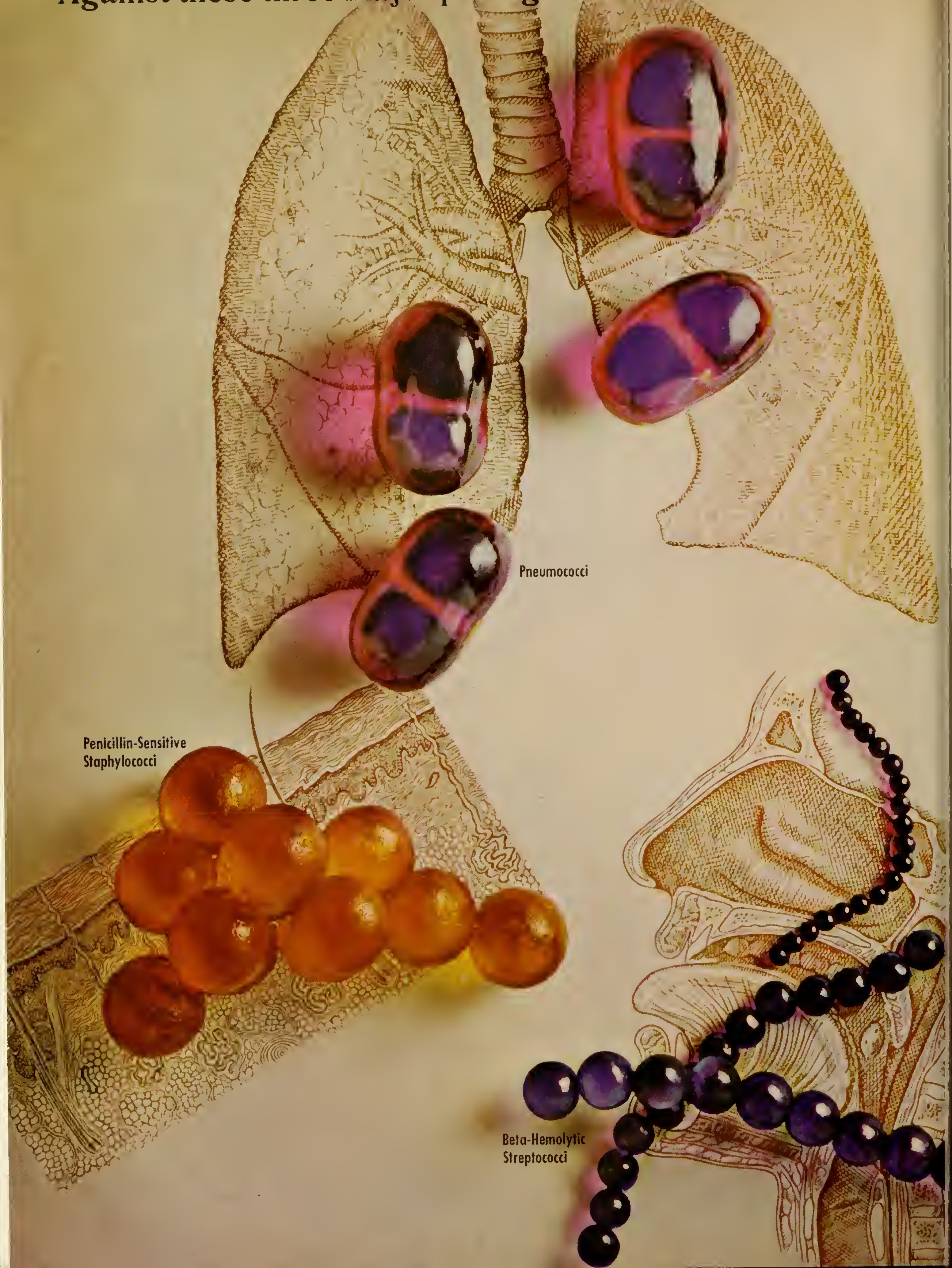
Pneumococci
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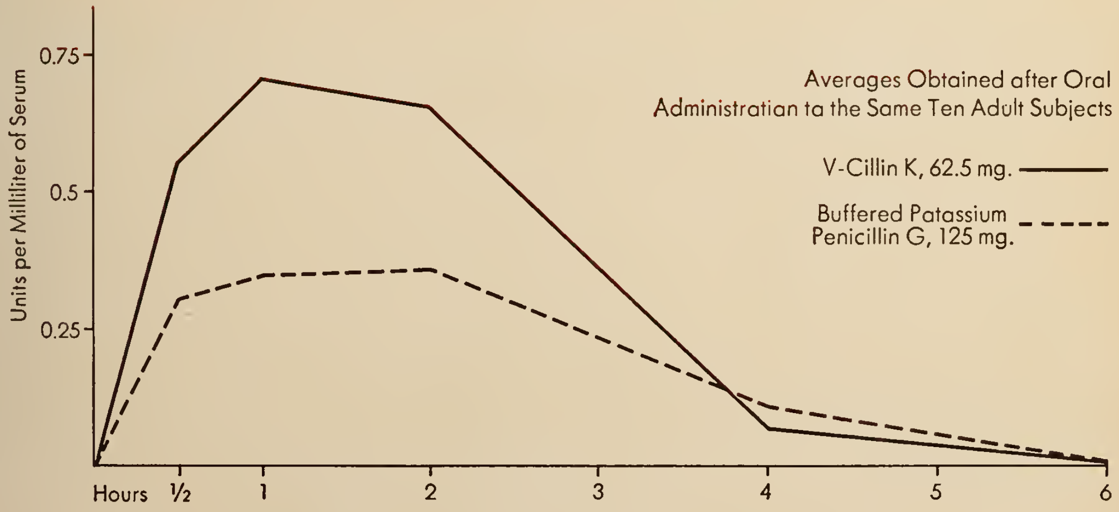
V-Cillin K® provides dependable oral antibacterial activity

because it combines a high degree of in-vitro activity...

Antibiotic	Staph.Aureus (Penicillin-Sensitive) MIC (mcg./ml.) Median	Staph.Aureus (Penicillin-Sensitive) MIC (mcg./ml.) Range	Streptococcus, Group A MIC (mcg./ml.) Median	Streptococcus, Group A MIC (mcg./ml.) Range	Diplococcus Pneumoniae MIC (mcg./ml.) Median	Diplococcus Pneumoniae MIC (mcg./ml.) Range
Penicillin V	0.02	0.02-0.04	0.02	0.003-0.4	0.01	0.005-0.2
Penicillin G	0.02	0.005-1.6	0.005	0.002-0.2	0.02	0.01-0.1
Methicillin	1.6	0.4-6.3	0.2	0.1-0.4	0.2	0.1-1.6
Oxacillin	0.4	0.1-3.1	0.04	0.02-0.4	0.1	0.04-0.8
Cloxacillin	0.2	0.2-0.8	0.1	0.1-0.8	—	—
Nafcillin	0.4	0.2-0.8	0.04	0.02-0.1	0.02	0.02-0.2
Ampicillin	0.2	0.1-0.8	0.02	0.01-0.04	0.02	0.01-0.04

Adapted from Klein, J. O., and Finland, M.: New England J. Med., 269:1019, 1963.

with high blood levels, even in the presence of food



Adapted from Griffith, R. S., and Black, H. R.: Current Ther. Res., 6 253, 1964.

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Potassium Phenoxymethyl Penicillin

(See next page for prescribing information.

New 500 mg. tablets . . . a more convenient way to give high doses

Description: V-Cillin K is the potassium salt of V-Cillin® (phenoxymethyl penicillin, Lilly). This chemically improved form combines acid stability with immediate solubility and rapid absorption. Higher serum levels are obtained more rapidly with this penicillin than with equal oral doses of penicillin G. The higher serum levels and acid stability of V-Cillin K make it a more dependable penicillin for oral use.

V-Cillin K, Pediatric, is an oral solution of clinically proved V-Cillin K in teaspoon dosage form. When mixed as directed, each 5 cc. (approximately one teaspoonful) will contain 125 mg. (200,000 units) phenoxymethyl penicillin as the potassium salt.

Indications: V-Cillin K has been shown to be effective in the treatment of streptococcus, pneumococcus, and gonococcus infections as well as infections caused by sensitive strains of staphylococci. It may be used for the prophylaxis of streptococcus infections in patients with a history of rheumatic fever and for the prevention of bacterial endocarditis after tonsillectomy and tooth extraction in those patients with a history of rheumatic fever or congenital heart disease.

Contraindication: V-Cillin K should not be administered to a patient with a history of penicillin hypersensitivity.

Warnings: In rare instances, the use of penicillin may cause acute anaphylaxis which may prove fatal unless promptly controlled. This type of reaction appears more frequently in patients with a history of sensitivity reactions to penicillin and in those with bronchial asthma or other allergies. Resuscitative drugs should be readily available for emergency administration. These include epinephrine and pressor drugs (as well as oxygen for inhalation) for relief of immediate allergic manifestations and antihistamines and corticosteroids for delayed effects.

Precautions: V-Cillin K should be used cautiously, if at all, in a patient with a strongly positive history of allergy.

In prolonged therapy with penicillin, and particularly with hig parenteral dosage schedules, frequent evaluation of the renal an hematopoietic systems is recommended.

In suspected staphylococcus infections, proper laboratory studie (including sensitivity tests) should be performed.

The use of penicillin may be associated with the overgrowth o pencillin-insensitive organisms. In such cases, its administration shoul be discontinued, and appropriate measures should be taken.

Adverse Reactions: Although serious allergic reactions are much les common with administration of oral penicillin than with intramuscula forms, manifestations of penicillin allergy may occur.

Penicillin is a substance of low toxicity, but it does possess a signi cant index of sensitization. The following hypersensitivity reactio associated with the use of penicillin have been reported: skin rashe ranging from maculopapular eruptions to exfoliative dermatitis; ur caria; and reactions resembling serum sickness, including chills, feve edema, arthralgia, and prostration. Severe and often fatal anaphyla has occurred (see Warnings). Hemolytic anemia, leukopenia, thro bocytopenia, and nephropathy are rarely observed side-effects an are usually associated with high parenteral dosage.

Administration and Dosage: For Tablets V-Cillin K and for V-Cillin Pediatric, the usual dosage ranges from 125 mg. (200,000 units) thr times a day to 500 mg. (800,000 units) every four hours. For infan the daily dosage may be 50 mg. per Kg. of body weight divided in three doses.

Beta-hemolytic streptococcus infections without associated ba teremia may be treated with 200,000 to 400,0000 units three times day. Therapy should be continued for a minimum of ten days to preve development of rheumatic fever and/or other serious complicatio Dosage for routine streptococcus prophylaxis in patients with a histo of rheumatic fever or congenital heart disease may be 200,000 un once or twice daily. When such patients undergo tonsillectomy, too extraction, or other minor surgery, the prophylactic dose should b 500,000 units every six hours given two days prior to surgery and f two days postoperatively. If oral medication is not feasible on the d of surgery, parenteral therapy should be considered. Mild to mod ately severe pneumococcus pneumonia has been treated effectiv with 250 mg. every six hours.

In staphylococcus infections, 400,000 units or more should be giv every six to eight hours in conjunction with indicated surgical proc dures.

For gonorrhea in males, 500 mg. (800,000 units) every four hours f three doses may be employed; in females, 500 mg. every four hou for six doses are recommended. Refractory infections generally respo to a second treatment three to four days following completion of t first. Treatment of gonorrhea with severe complications should individualized, with prolonged and intensive treatment. Patients with suspected lesion of syphilis should have a dark-field examination b fore receiving penicillin and monthly serologic tests for a minimum three months.

How Supplied: Tablets V-Cillin K, U.S.P., 125 mg. (200,000 units), bottles of 50 and 100; and 250 mg. (400,0000 units) and 500 m (800,000 units), in bottles of 24 and 100.

V-Cillin K, Pediatric, for Oral Solution, 125 mg. (200,000 units) p 5 cc. of solution, in 40, 80, and 150-cc.-size packages. [0320

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700

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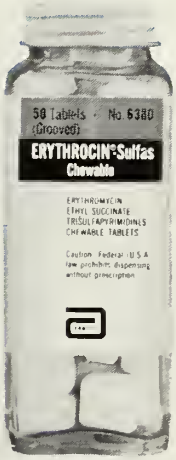

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(Erythromycin ethyl succinate-trisulfapyrimidines chewable tablet)

In clinical trials[1,2], this orange-flavored tablet was given to 55 patients, aged four months to 18 years.

Diagnoses (multiple in some cases) represented a cross section of bacterial infections commonly seen in pediatric office practice.

Therapy was given from three to 12 days, with an average of six days.

Of the 55 patients, 30 were reported cured within 72 hours, while 22 showed partial recovery within the same time, and subsequent clinical cure.

A clinical cure rate of 94.5%

ERYTHROCIN®-SULFAS Granules

(Erythromycin ethyl succinate-trisulfapyrimidines granules for oral suspension)

87 patients were treated[1,2]—all children, ages four months to 15 years.

The diagnoses were multiple in some cases and were chiefly bacterial infections of the respiratory tract.

Dosage was maintained from three to 10 days; average treatment was five days. All of the ill children accepted the orange-flavored suspension favorably.

53 were clinically cured within 72 hours, while 32 showed partial relief within the same time, and subsequent clinical cure.

701358

A clinical cure rate of 97.7%

ABBOTT

Brief Summary on next page

1. Case Reports on File, Dept. Clin. Development, Abbott Laboratories.
2. Polley, R.F.L., Use of Erythromycin-Sulfas in Office Practice, Western Med., 7:177, July, 1966.

ERYTHROCIN®-SULFAS
Brief Summary

Contraindications: Known sensitivity to erythromycin or sulfonamides. Because of the possibility of kernicterus with sulfonamides, do not use in pregnancy at term, premature or newborn infants.

Warnings: As with other forms of sulfonamide therapy, carefully evaluate patients with liver or kidney damage, urinary obstruction, or blood dyscrasia. Deaths have been reported from hypersensitivity reactions and blood dyscrasias following use of sulfonamides. Perform blood counts and liver and kidney function tests if used repeatedly at close intervals or for long periods.

Precautions, Side Effects: Occasionally mild abdominal discomfort, nausea or vomiting may occur with erythromycin, generally controlled by reduction of dosage. Mild allergic reactions (such as urticaria and other skin rashes) may occur. Serious allergic reactions have been extremely infrequent. Use sulfonamides with caution in patients with a history of allergy. Assure adequate fluid intake to prevent crystalluria and institute alkali therapy if indicated. If overgrowth of nonsusceptible organisms occurs, withdraw the drug and institute appropriate treatment. If a patient should show signs of hypersensitivity, appropriate countermeasures (e.g. epinephrine, steriods, etc.) should be administered and the drug withdrawn.

Adverse Reactions: Sulfonamide therapy may be associated with headache, nausea, vomiting, urticaria, diarrhea, hepatitis, pancreatitis, blood dyscrasias, neuropathy, drug fever, skin rash, injection of the conjunctiva and sclera, petechiae, purpura, hematuria and crystalluria.

Side effects due to erythromycin are infrequent, but occasional abdominal discomfort, nausea, or vomiting, urticaria and other skin rashes may occur.

Supplied: The Granules for Oral Suspension come in bottles of 60 ml. and 150 ml. The Chewable tablets are in bottles of 50. Each 5-ml. teaspoonful of reconstituted Granules or each Chewable tablet provides erythromycin ethyl succinate equivalent to 125 mg. of erythromycin activity and 167 mg. of each of sulfadiazine, sulfamerazine and sulfamethazine.

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PHENOBARBITAL . . . . 16 mg.
(Warning: may be habit forming)
BENSULFOID ® (See P D R) . . . . . 65 mg.
Precaution: same as 16 mg. of phenobarbital

Constructive Therapy

A Solfoton tablet or capsule at 6 hour intervals maintains sedation at the threshold of calmness, sustaining a mental climate for purposeful living.

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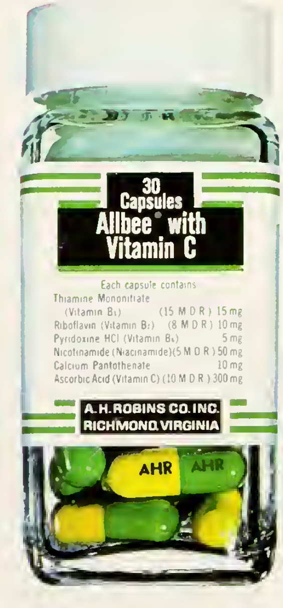
30 Capsules
Allbee® with Vitamin C
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Thiamine Mononitrate (Vitamin B1) (15 M.D.R.) 15 mg
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hysocine hydrobromide	0.0065 mg.	0.0195 mg.
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Brief summary. Blurring of vision, dry mouth, difficult urination, and flushing or dryness of the skin may occur on higher dosage levels, rarely on usual dosage. Administer with caution to patients with incipient glaucoma or urinary bladder neck obstruction. Contraindicated in acute glaucoma, advanced renal or hepatic disease or a hypersensitivity to any of the ingredients.

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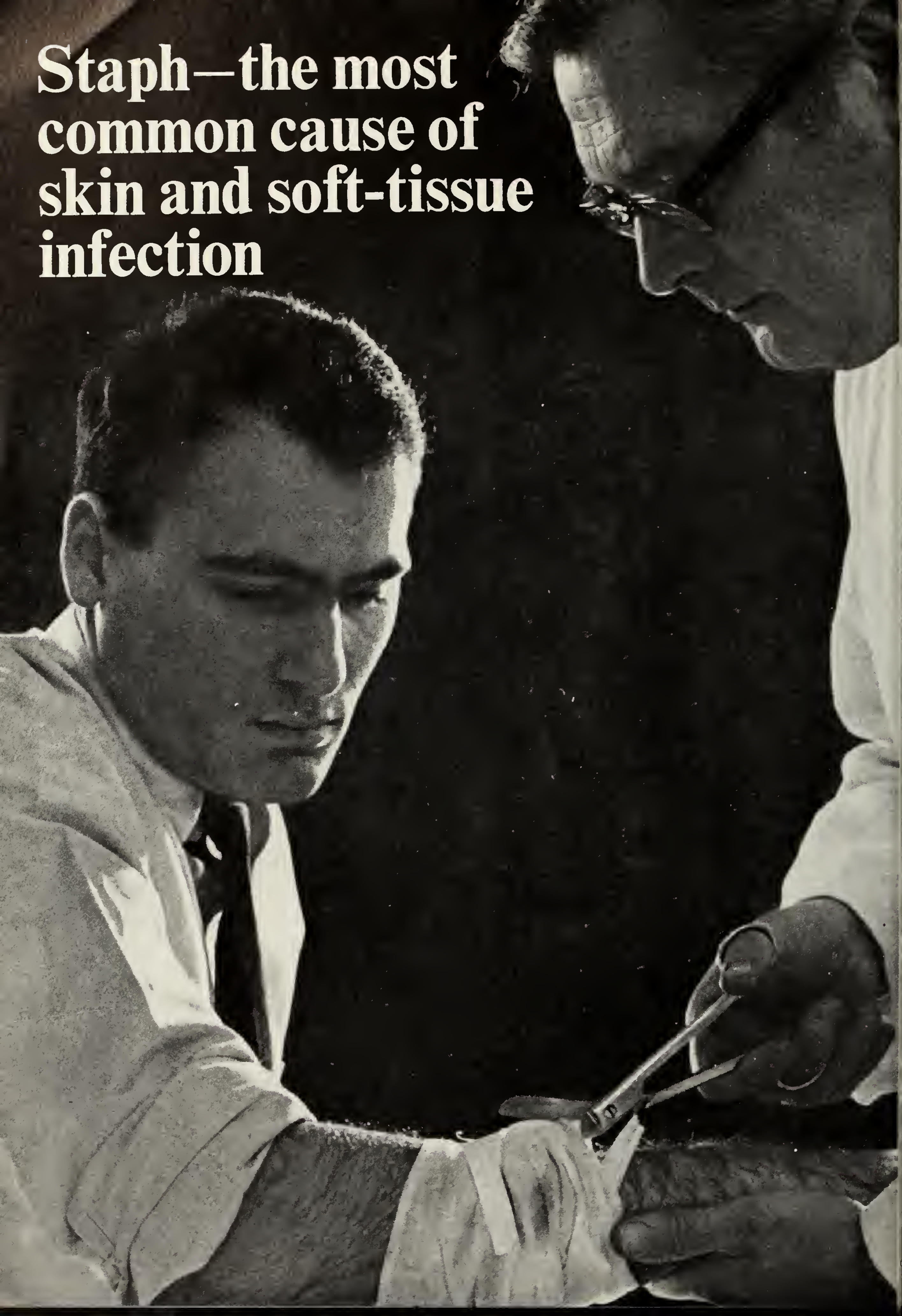
Staph—the most common cause of skin and soft-tissue infection



..reliably controlled with specific therapy

A suitable dosage form for every staph situation

Staph—the most common cause of skin and soft-tissue infection—also is responsible for many more serious infections, such as pneumonia, osteomyelitis, and septicemia. Often, a seemingly minor skin infection is the source of metastatic spread to deeper structures. When findings on culture incriminate staph as the cause, Prostaphlin (sodium oxacillin) will provide specific effective therapy.

Bactericidal effectiveness. Hardly a staph organism can resist the bactericidal action of Prostaphlin (sodium oxacillin), as shown by a 34-month *in vitro* study. Of all staph isolates tested, 99.5% were sensitive to oxacillin.[1]

Clinically proven. There is a high correlation between these *in vitro* findings and clinical results. Of 610 patients treated with Prostaphlin (sodium oxacillin), 89.8% were reported cured or improved, including those with staph infections resistant to penicillin G.[2] And since resistance does not appear to develop *in vivo,* therapy with oxacillin can be extended when necessary.

Outstanding safety record. Besides being staph-specific and rapidly absorbed—Prostaphlin (sodium oxacillin) has established an outstanding record of safety during five years of widespread clinical use. Continuous high blood levels of oxacillin have not produced toxic effects on kidney function, assuring a significant margin of safety. However, as with all penicillins, the possibility of allergic response should be considered.

Capsules, Oral Solution and Injectable. Prostaphlin (sodium oxacillin) is available in three flexible dosage forms to suit the age of the patient and severity of infection—capsules, an oral solution for pediatric use, and multi-dose vials for injection, I.M. or I.V.

PRESCRIBING INFORMATION: For complete information, consult Official Package Circular. *Indications:* Infections caused by Staphylococci, particularly those due to penicillin G-resistant Staphylococci. *Contraindications:* A history of severe allergic reactions to penicillin. *Precautions:* Typical penicillin-allergic reactions may occur. Safety for use in pregnancy and premature infants is not established. Because of limited experience, use cautiously and evaluate organ system function frequently in neonates. Mycotic or bacterial superinfections may occur. Assess renal, hematopoietic and hepatic function intermittently during long-term therapy. *Adverse Reactions:* Skin rashes, pruritus, urticaria, eosinophilia, nausea, vomiting, diarrhea, fever and occasional anaphylaxis. Rare cases of reversible hepatocellular dysfunction have occurred. Moderate SGOT elevations have been noted. Thrombophlebitis has occurred occasionally during intravenous therapy and leukopenia was noted in two cases. *Usual Oral Dosage:* Adults: 500 mg. *q*.4 or *q*.6*h*. Children: 50 mg./Kg./day. *Usual Parenteral Dosage:* Adults: 250-500 mg. *q*.4 or *q*.6*h*. Children: 50 mg./Kg./day. Treat beta-hemolytic streptococcal infections for at least 10 days. Give oral drug 1 to 2 hours before meals. *Supplied:* Capsules—250 and 500 mg. in bottles of 48. Injectable—250 mg., 500 mg., and 1 Gm. dry filled vial for I.M./I.V. use. For Oral Solution—100 ml. bottle, 250 mg./5 ml. when reconstituted. **A.H.F.S. CATEGORY 8:12.16**

References: 1. Abstracted from *Antibiotic Sensitivity of Staphylococci Studied from November 1962 through August 1965*, reported by Griffith, L.J., Staphylococcus Reference Laboratory, V.A. Hospital, Batavia, N.Y. 2. Data on file, Bristol Laboratories.

BRISTOL

BRISTOL LABORATORIES/Division of Bristol-Myers Co., Syracuse, N.Y.

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The Journal
of the
South Carolina Medical Association

VOLUME 63 September, 1967 NUMBER 9

SKIN SORES AND ACUTE GLOMERULONEPHRITIS

THE EPIDEMIOLOGY OF 212 SOUTH CAROLINA CASES[*]

JOHN F. FINKLEA, M. D.[**]

Skin lesions have long been recognized as among the streptococcal infections that may precede acute glomerulonephritis. Both Futcher[1] and Hayman[2] reviewed acute nephritis preceded by skin lesions in the period before antibiotics. The problem is worldwide and cases have been reported from Europe,[3] North America,[4] Latin America,[5] Africa,[6,8] and Asia.[9]

Recent nephritis epidemics in Minnesota[10,11] and Trinidad[12,13] as well as hospital series from North Carolina,[14] Georgia,[15] Florida,[16] Alabama,[17] and California[18] emphasize that in many areas of the United States the skin is now more important than the pharynx as a site for streptococcal infection which precedes acute nephritis.

This retrospective study will describe the descriptive epidemiology of 212 cases of acute glomerulonephritis admitted to Charleston, South Carolina hospitals from 1960 through 1965.

Methods

Setting and population at risk: Charleston County is a Standard Metropolitan Statistical Area located on the coast of South Carolina as shown in figure one. Census tracts of the County were grouped into six regions indicated in figure one. These regions were the peninsular city, the north urban area, the West Ashley urban area, the East Cooper urban area, the West Ashley rural area and the East Cooper rural area. Population totals for each area were extracted from the 1960 census.

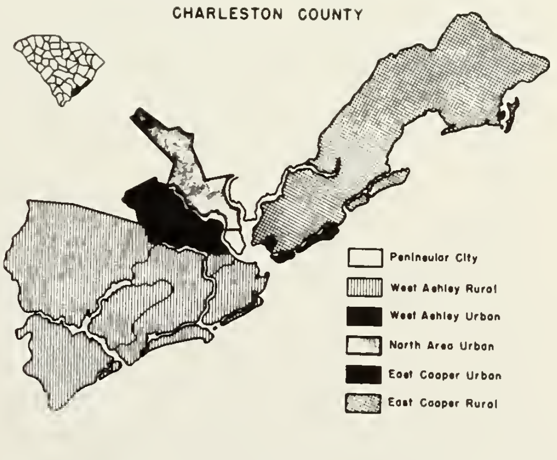

Figure 1

Hospital record review: For this study acute glomerulonephritis was defined as a disorder occurring in an individual without previous renal disease and characterized by edema, hematuria and proteinuria often accompanied by hypertension and circulatory congestion.

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[*] This study was supported by an allocation from the Medical College of South Carolina's National Institutes of Health General Research Support Grant (5S01 F 5420-05).

[**] Assistant Professor of Preventive Medicine, Medical College of South Carolina, Charleston, South Carolina.

Medical records of three hospitals for acute disease serving the county were searched to extract demographic, temporal and clinical data. Only one other hospital, the U. S. Naval Hospital, cared for medical pediatric patients. Clinicians who were on duty at this hospital during the study period can recall less than five acute nephritis cases. Two other hospitals may have admitted small numbers of adult acute nephritics who were not included in this report.

Charleston County residents rarely seek acute hospital care elsewhere but many patients are referred to the Medical Center in Charleston from other parts of the state.

Results

Year of admission: Table 1 distributes acute nephritis hospital admissions by calendar year and county of the patient. Charleston County admissions varied greatly from year to year and were distinctly higher in 1960 and 1964. However, out-of-county admissions arrived in a steady trickle of five to six per year.

Table 1

Acute Glomerulonephritis Admissions to Charleston County Hospitals, 1960-1965

Year	Number of Admissions		
	Charleston County Residents	Non-Residents	Total
1960	41	5	46
1961	26	2	28
1962	26	6	32
1963	15	5	20
1964	41	5	46
1965	34	6	40
All Years	183	29	212

Clinical history category: Admissions were partitioned into three categories which were based on the patient's clinical history of infection preceding nephritis. The skin sore category included all patients reporting skin sores during the month prior to admission. A sore throat category included patients recalling a sore throat episode during the month prior to admission. Lastly, a "no history" category included patients recalling neither skin sores or sore throat. Ten patients in the last category did recall minor respiratory illnesses which may or may not represent streptococcal infection. Since one might expect such a history from a similar portion of the general population of children, these cases were placed in the "no history" category.

Table 2 distributes the 212 cases by clinical history category and county residence. The clinical history distribution for Charleston County residents differs significantly from out-of-county residents ($.02 > p > .01$), with noticeably more sore throat cases and fewer skin sore cases referred from out of county. The sore throat category contributes about 20 per cent of the county cases but only 40 per cent of the referral cases, while the comparable skin sore partition is 60 per cent for county patients and 30 per cent for referral cases.

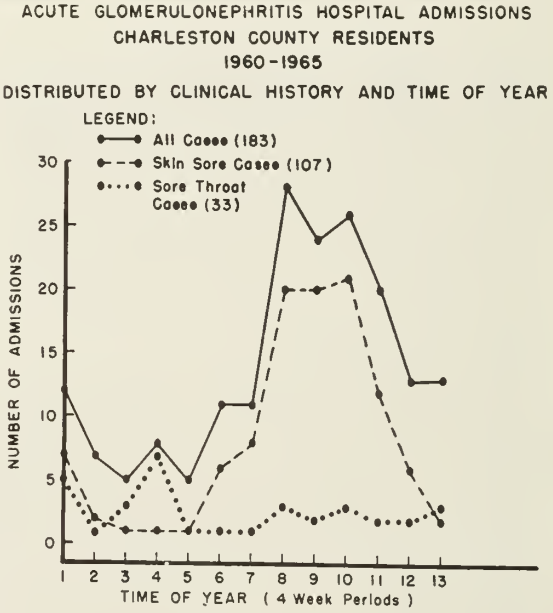

Figure 2

Seasonal distribution: Figure 2 distributes admissions for acute nephritis over 13 four-week periods of the calendar year. Total admissions seem low from the end of January through the middle of May. The total admission curve then rises to a crest which persists from the middle of July through the middle of September before gradually declining to the mid-winter valley. The skin sore admission curve follows that of total admissions but has a more distinct valley and crest. The sore throat admission curve is generally a plateau

Table 2

Acute Glomerulonephritis Hospital Admissions Distributed by Residence and Clinical History Category

Clinical History Category	Residence: Charleston County		Out of County		All Admissions	
	Number	Per Cent	Number	Per Cent	Number	Per Cent
Skin Sores	107	58.5	9	31.0	116	54.7
Sore Throat	33	18.0	11	38.0	44	20.8
Neither Skin Sores nor Sore Throat	43	23.5	9	31.0	52	24.5
All Categories	183	100.0	29	100.0	212	100.0

Ho Clinical categories independent of county residence
CHI Square (2 df) = 9.037
$.02 > p > .01$

with a gentle peak in late winter. "No history" admission curve (which is not plotted) is also generally a plateau with a distinct peak in December.

Mosquito population: Figure 3 depicts the mean Charleston County adult mosquito index for the months May through October. Adult mosquitoes may be seen during warm periods in mid-winter but mosquito bites are infrequent from early December through mid-March. Mosquito population indices are recorded only for the months May through October when numbers reach a public nuisance level. The index usually peaks in July of each year.

The admission curve for acute glomerulonephritis following skin sores begins its yearly climb about two to four weeks after the adult mosquito population emerges in the spring. Similarly, the skin sore admission curve rapidly declines two to four weeks after adult mosquitoes decline to a non-nuisance level.

Age: Figure 4 presents age curves for total nephritis, nephritis after skin sores, and nephritis after sore throat. No cases of any category occurred during the first year of life. The age curve for skin sore nephritis crests abruptly during the third, fourth, and fifth years of life and then gently declines through puberty. Skin sore cases are rare after age 15. On the other hand, sore throat cases crest during the seventh and eighth years of life and a few occur in the postpubertal years. Cases of the "no history" category are not plotted but

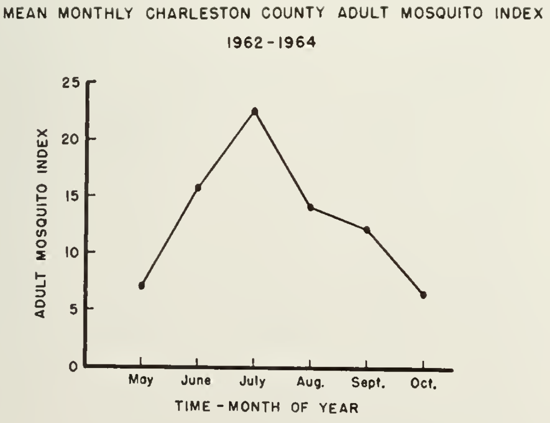

Figure 3

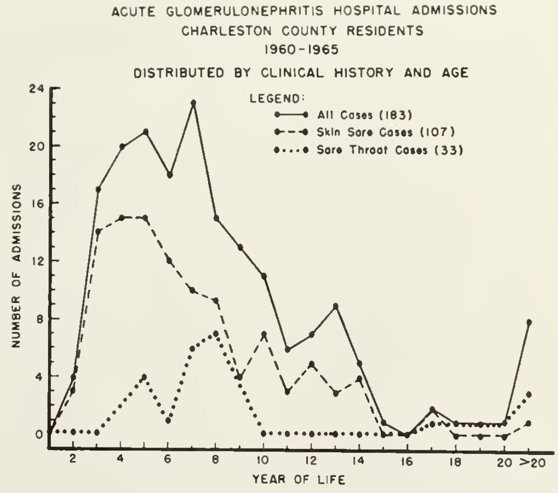

Figure 4

Table 3

Acute Glomerulonephritis Hospital Admissions Among Charleston County Residents Distributed by Clinical History and Sex

Clinical History	Sex					
	Male		Female		Both Sexes	
	Number	Per Cent	Number	Per Cent	Number	Per Cent
Skin Sores	59	55.1	48	44.9	107	100.0
Sore Throat	29	87.8	4	12.2	33	100.0
Neither Skin Sores nor Sore Throat	26	60.5	17	39.5	43	100.0
All Histories	114	62.3	69	37.7	183	100.0

Ho Sex distribution independent over clinical histories
CHI Square (2 df) = 6.2024
.05 > p > .02

show a curve much like the sore throat category.

Sex: Table 3 distributes acute nephritis by sex and clinical history category. Just over three-fifths of all cases are male. Males also predominate in each history category but the sex distribution is not independent of category (.05 > p > .02) because males compose an overwhelming seven-eights of the sore throat cases.

Race and residence: Table 4 distributes mean yearly incidence rates for all cases of acute nephritis and for skin sore cases by race and area of residence. As is noted, several of the cells are based on a population or a number of cases which is too small for rate stability.

Negroes are 5.3 times more likely to develop acute nephritis than are whites. Moreover, Negroes are 17.2 times more likely to develop nephritis after skin sores. Incidence rates vary greatly with area of residence, being highest in West Ashley rural area and in the peninsular city. These areas have a population in intimate contact with low marshy areas. On the other hand, incidence rates for nephritis not associated with skin sores are relatively stable within a race over all residence areas.

Table 4

Mean Yearly (Acute Glomerulonephritis) Incidence Rates per 100,000, 1960-1965 Distributed by Residence of Patient, Race and Skin Sore History

Residence (Area of Charleston County)	Mean Yearly Incidence Rate per 100,000					
	Negro		White		All Races	
	Total	After Skin Sores	Total	After Skin Sores	Total	After Skin Sores
Peninsular City	27.3	20.3	2.0	0.5	14.9	10.6
West Ashley Urban	40.3*	4.5*	6.0	0.8	10.9	1.3
East Cooper Urban	18.7*	0.0*	7.4	2.5	8.7	2.2
North Area Urban	18.8	11.5	4.9	0.6	7.9	2.9
West Ashley Rural	45.7	37.9	12.6	3.9	29.8	22.2
East Cooper Rural	18.3	11.4	4.9*	0.0*	14.1	7.8
Total County	29.3	20.6	5.5	1.2	14.1	8.2

*Rates based on numbers too small to be considered reliable.

Table 5

Estimated Cost of Hospitalization Caused by Acute Glomerulonephritis Among Charleston County Residents*

	Cost	
Year	Total	Skin Sore Cases
1960	$19,270	$ 9,400
1961	12,220	8,930
1962	12,220	4,700
1963	7,050	3,760
1964	19,270	13,160
1965	15,980	10,340
All Years	$86,010	$50,290
Average Yearly Cost	$14,168	$ 8,381

*Estimate based on County reimbursement of $22.38 per day for 21 days per case or $470 per case.

Cost of Hospitalization: Table 5 details the direct cost of hospitalization to Charleston County. Since Charleston County reimbursed only part of hospital costs, the actual mean yearly cost of hospitalization during 1960-1965 was roughly $28,000 for all nephritis and $17,000 for nephritis after skin sores. If the same pattern persists for the next six years we may assume a mean yearly cost to the county of $40,000 for all acute nephritis and $23,000 for nephritis after skin sores.

The long length of hospitalization is occasioned by the lack of adequate home care during convalescence.

Discussion

Acute nephritis after skin sores is epidemiologically distinct from acute nephritis after sore throat. These two types of nephritis differ in age, sex, racial, seasonal, and residential patterns. Skin sore nephritis occurs most frequently in pre-school children and sore throat nephritis in school children. Males contribute a larger portion to sore throat nephritis. The skin sore nephritis incidence rate for Negroes is 17.2 times that for whites, while sore throat nephritis is only moderately increased among Negroes. Skin sore nephritis crests during the summer with its epidemic curve closely following the mosquito population, while sore throat nephritis smolders year-round and crests each winter. Within each of the major racial groups skin sore nephritis varies greatly over residential areas but sore throat nephritis is relatively constant over all areas.

The group of cases placed in the "no history" category resembles sore throat nephritis in epidemiology. Like sore throat nephritis, the "no history" category has an age crest among school children, a seasonal peak in early winter, and a racial incidence which is only slightly increased among Negroes.

Results of cultures were not included in the analysis because cultures were not taken from all of the critical sites, i.e. nares, pharynx, and skin sores. In addition, a number of patients had received chemotherapy before admission. Of the skin sore patients, about two-thirds of sores cultured and one-tenth of throats cultured were positive for group A beta hemolytic streptococci.

The relative importance of skin sores as a site for streptococcal infection preceding nephritis is a persistent finding in the southern United States. Both the county and referral percentages of skin sore nephritis in this report are within the range of one-third to two-thirds found in the South. Among Southern series, nephritis preceded by skin sores is most prevalent in areas immediately adjacent to the coast. The apparent difference in antecedent skin sores between county cases and referral cases may mirror this coastal effect. Within Charleston County the highest attack rates are in those areas in closest proximity to marshland and tidal waterways.

Nephritis after skin sores generally occurs in a younger population than nephritis after sore throat. The Charleston experience reinforces this observation. The usual preponderance of males which is seen in sore throat nephritis is decreased in skin sore nephritis from most areas. However, this may be a racial, not a skin sore effect. If Charleston skin sore nephritis is partitioned by race and sex, a more striking feature emerges. The proportion of Negro males and females affected was equal while there were ten white males and no white females.

In the southern United States, the overwhelming majority of nephritis cases after skin sores have been among Negroes. This is further documented in the incidence rates tabulated for regions of Charleston County. The highest incidence rates occur in Negro children living on the sea islands.

The economic importance of this illness in a county with limited funds for hospital care of the indigent has been detailed. It would seem more reasonable to expend funds for investigation and attempted control of nephritis than to continue paying an ever increasing hospital bill which may be unnecessary.

Other reports have stressed that the problem is largely nephritis after impetigo. The present report clearly associates mosquito population with skin sore nephritis in the proper time sequence to indicate a causative role. The author feels that initial skin trauma is caused by mosquito and sandfly bites to which males may be exposed more often. The further course of these bites is determined by three factors: hypersensitivity of the individual, opportunities for bacterial invasion, and availability of medical care.

Host hypersensitivity to salivary excretions of arthropods is well known. Immediate hypersensitivity is more appreciated than delayed hypersensitivity but the latter is more important in the production of a necrotic lesion. Delayed hypersensitivity commonly begins in the second or third summer of exposure and lasts a variable length of time. This observation fits the skin sore nephritis age curve.

Bacterial colonization of skin sores is usually limited to streptococci or staphlococci or both. [17, 20] The reservoir of these bacteria could be the nares, pharynx, or another skin sore of the same or a different individual. Transmission could take place by direct contact or a mechanical vector such as flies.[21] Bacterial invasion and the formation of a shallow skin ulcer with a "stick-on" crust are facilitated experimentally by repeated stripping of the epidermis, which is analogous to scratching.[22] This ulcer may harbor group A streptococci for several months.[19]

Clinicians in Charleston feel that large numbers of both Negro and white children develop skin sores during the summer. Ambulatory care is more available and more frequently utilized by whites. Thus skin infections can be treated earlier and nephritis may be prevented. Adequate soap and water, proper nutrition, screening, and home care are less available to our Negro population.

It is unlikely that arthropod bites or hypersensitivity can be eliminated. The intensive mosquito abatement program of Charleston County may have actually reduced the problem but, after several years, arthropod bites, subsequent sores, and skin sore nephritis are still common.

On the other hand, we may be able to prevent nephritis by minimizing bacterial invasion of the denuded dermis. Screening, proper nutrition, better personal hygiene, and proper utilization of more available medical care are undoubtedly the long term answers. These goals often require several decades.

In the meantime can we possibly attack biological aspects of the problem of skin sore invasion? Penicillin therapy of individuals with skin sores in conjunction with crust removal and washing with antibacterial soaps is practical for contacts of the nephritis case. The same course is impractical on a population basis because of the twin problems of penicillin hypersensitivity and a flora of the sore which often contains both staphlococci and streptococci.[23] Drug resistant staphyococci undoubtably occur in the general population and would be selectively encouraged. When these resistant organisms combined with streptococci in skin sores, systemic antibiotics would probably be ineffective.[24]

A rational control program cannot be designed until the following questions are answered:

1. What is the group and type distribution of streptococci by age, sex, race, and site in the population?
2. Are there separate skin strains of nephritogenic streptococci?
3. How long do streptococci persist in the pharynx and in skin sores in South Carolina?
4. How important are staphlococci in skin sore flora and in the etiology of nephritis?
5. What are the species differences among

mosquitoes and sandflies with reference to the production of skin sores?

6. What, if any, arthropods serve as mechanical vectors of skin sore flora?

Summary

1. Acute nephritis in Charleston County is a common illness with two different epidemiologies.
2. The quantitatively most important epidemiology is that of skin sore nephritis, which accounts for six-tenths of all cases.
3. Acute nephritis associated with skin sores primarily affects pre-school Negro children.
4. Seasonal patterns strongly indicate that mosquitoes are causally related to skin sore nephritis.
5. Skin sore nephritis is largely a socioeconomic disease.
6. The cost of skin sore nephritis justifies its investigation so that an effective control program may be designed.
7. Needed investigations are outlined.

Acknowledgement

The author wishes to thank Mr. M. M. Askey, Jr., entomologist and director of the Charleston County Mosquito Abatement Program for his kind assistance.

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CORRECT SURGICAL ATTIRE AND SAFE METHOD OF POST-SCRUB DRYING OF HANDS*

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Contamination resulting from failure to observe generally accepted principles of aseptic technic in surgical attire and in the post-scrub drying of hands must be considered among the causes of infection of operative wounds. Sources of contamination are fallout from scalp[1] hair respiratory tract secretions, dust and lint from scrub suit and shoes (Fig. 1) and[2] the escape of pathogenic micro-organisms through tears in gloves.[3, 4, 5] (Fig. 2, 3, 4)

Recently attention has been called to fall-out of bacteria from the perineum as a source of environmental contamination.[6] Trousers snugly fitted at the ankles are advocated as a control measure. For operations in which it is important to maintain a very high degree of

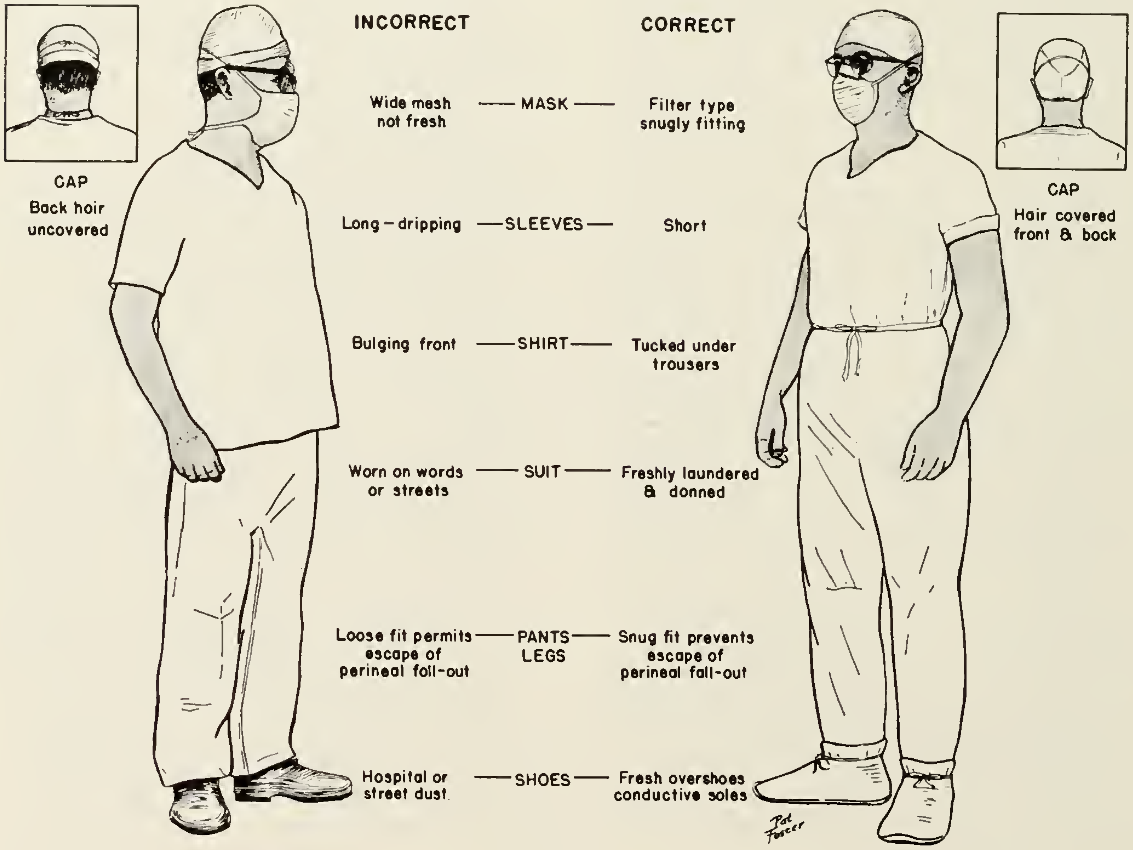
INCORRECT
CORRECT
CAP
Back hair uncovered
CAP
Hair covered front & back
Wide mesh not fresh — MASK — Filter type snugly fitting
Long – dripping — SLEEVES — Short
Bulging front — SHIRT — Tucked under trousers
Worn on wards or streets — SUIT — Freshly laundered & donned
Loose fit permits escape of perineal fall-out — PANTS LEGS — Snug fit prevents escape of perineal fall-out
Hospital or street dust — SHOES — Fresh overshoes conductive soles

Figure 1
Surgical Attire

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*From the Roper Hospital and the Department of Anatomy, Medical College of South Carolina.
This work was supported in part by United States Public Health Service Grant H-4176.

asepsis, contamination from the skin is prevented by garments made of a light weight, closely woven hydrophilic fabric and are fitted snugly at the neck, wrists and ankles.[7, 8]

The hospital furnishes factory-packaged sterile supplies and expensive sterilizing equipment which is checked by cultures at regular intervals. On account of the inherent limitations of sterile technic and the associated apparent inconsistencies, and particularly the difficulty of fixing the blame for an infection upon a specific technical error, there are psychological difficulties in enforcing regulations.[9] Nurses are hesitant to correct surgeons and surgeons are loath to correct fellow surgeons except in case of technical error affecting the operation at hand.

While it is recognized that sterile technic is only relative and that to some extent the requirements vary for different types of cases,

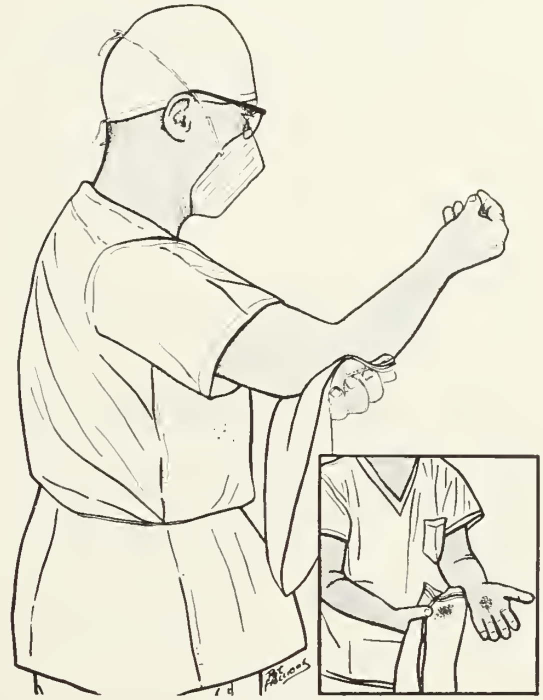

Figure 2
Incorrect—Hanging portion of towel touching scrub suit. Water from elbow passing through towel to contaminate hand, as demonstrated by dye.
(Prioleau: Amer J Surg 113:586)

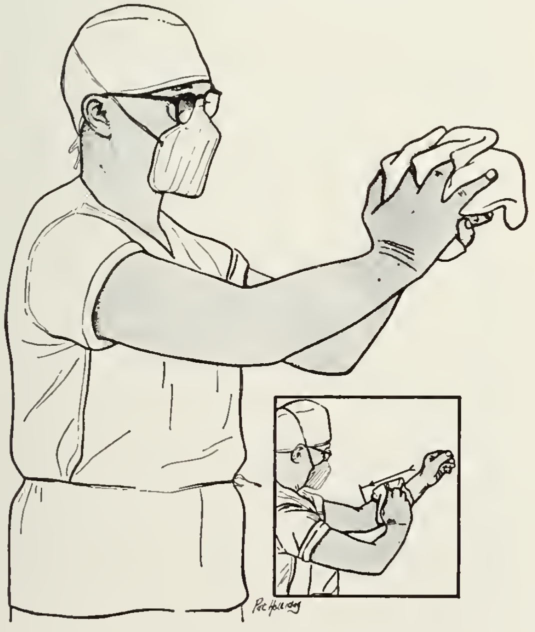

Figure 3
The hands are dried simultaneously. The distal two-thirds of the forearms are dried in turn.
(Prioleau: Amer J Surg 113:586)

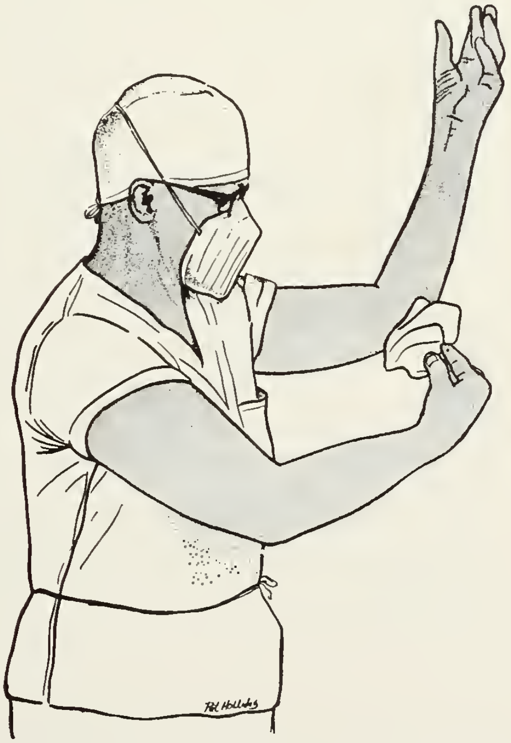

Figure 4
Both elbow regions are mopped with same surface of towel ball.
(Prioleau: Amer J Surg 113:586)

basic principles must be generally observed in order to maintain a safe standard in the department, and furthermore it must be borne in mind that a technical error of no particular significance to the immediate case can, as the result of cross contamination, affect subsequent cases and also other departments of the hospital. While the operating room supervisor is charged with the immediate responsibility of maintaining sterile technic, she must have the sincere interest and support of the surgeon in chief if her efforts are to be effective in the more or less personal area of surgical attire and preparation of the hands.

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Circulatory demand of peritonitis: Hemodynamic and metabolic responses to infection in dogs. P. A. Lamis, Jr.. M. G. Weidner. Jr., Shelby Yoakum, G. H. A. Clowes, Jr. (Charleston) Ann Surg 32:751-756. Nov 1966.

Peritonitis calls forth a complex response involving the endocrine, renal. nervous, respiratory and circulatory systems. This communication reports the response of the circulatory system to intraperitoneal sepsis produced experimentally in 20 dogs. Twelve animals protected from peritonitis were similarly studied. An increased demand on the circulatory system was produced by the sepsis and 11 of the 20 were unable to effect adequate cardiac output and died. The other nine were able to control the infection, maintain cardiac output. and survive. Metabolic acidosis was not observed with the decreased output. Patients with generalized peritonitis have been studied by similar methods and also demonstrated the necessity of maintaining an adequate circulation in face of the increased demands imposed by the sepsis. The etiology of this increased demand on the circulation remains under investigation.

Asymptomatic Polyps of Rectum and Colon: I. A Reexamination—J. Drexler (130 N La Cienega, Los Angeles). Arch Intern Med 119:503-509 (May) 1967.

In 194 patients over 45 years of age. 557 polyps were discovered during six years of routine proctosigmoidoscopies. The majority of lesions were multiple, preponderantly under 3 mm in size. and located in the posterior right quadrants of the rectosigmoid colon. Larger lesions had more histologic atypism. Proximal polyps were present in 7.6%. and recurrent polyps were subsequently found in 32%. Multiplicity did not increase significantly the frequency of finding follow-up polyps. A significantly higher proportion of heavy smokers was found among those having multiple polyps. Mucosal tags had the same value as an adenomatous polyp in identifying the polyp-prone colon. Thus patients with minute lesions on sigmoidoscopic examination should have barium enemas and annual proctosigmoidoscopy as routinely as those with larger adenomatous polyps. However, the productivity of these procedures in all patients with mucosal abnormalities needs further confirmation. For economic reasons, polyps under 5 mm may be treated by local fulguration without biopsy. From a histological and prognostic viewpoint. such therapy appears safe.

FOLLOW-UP ANALYSIS OF EMERGENCY ROOM ADMISSIONS

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Introduction

IN 1965, the *Journal of the South Carolina Medical Association* contained an analysis of 2,418 admissions to the Charleston County Emergency Room. The purpose of that article was to document the problems presented to a county emergency room. The Charleston County Emergency Room was at that time located in the old Roper Hospital. Old Roper was in the process of being destroyed and a new emergency room was to be constructed at the Pinehaven site. It had been noted that the Charleston County Emergency Room actually functioned as a continuous clinic. It was hoped by producing an analysis of patient admissions, that the new emergency room could more properly serve to administer to the needs of true medical emergencies.

Two years later, it would appear appropriate to examine the efficiency of the above mentioned aims of developing an area for true emergency care. It is generally conceded that ideal medical care cannot be given to a seriously injured patient in an environment that functions as a clinic. For all of these reasons, it shall be the purpose of this article to compare a recent analysis of emergency room admissions with the similar study made in 1965.

Method

In 1965, by random process, the month of January had been selected for study. To provide similarity, January 1967 was selected for recent study. One person perused the emergency room records of all patients seen during January, 1967. From the records were selected information concerning the age, sex, race and condition for which the patient was treated. Additionally, the time and date of the admission to the emergency room was recorded. These data were then appropriately sorted and organized.

Results

In reviewing the records of the new Charleston County Emergency Room, there was first noted a lack of exact agreement of several sets of figures describing the number and types of admissions on various days. These discrepancies are small and will not significantly influence a general survey of the data.

There were approximately 2,800 admissions to the Emergency Room in January, 1967. Of the 2,800 admissions, 66% were Negro and 34% were Caucasian. There was a near even distribution of sexes. In analyzing the admission dates, it was found that there were an average of 108 patients seen per weekend day as compared with 83 patients per week day. Fifteen percent of the patients are seen in the early morning hours from midnight to 7:00 a. m. Sixteen percent are seen from 7:00 a. m. to 12:00 noon. Twenty-seven percent are seen from noon to 7:00 p. m. and 42% are seen in the hours from 7:00 p. m. to midnight. See figure 1.

A broad classification of diagnosis reveals that the number of medical and surgical cases were approximately even, accounting for 66% of the patients. Of the remaining, 5% were ob-gyn cases, and 27% were pediatric cases.

Fig. I

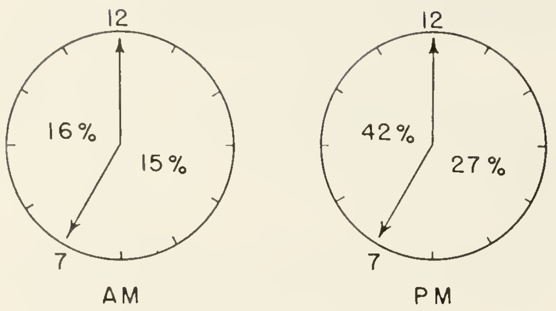

Figure 1

A graphic representation is made of the times during which patients are admitted to the emergency room. The evening hours predominate, especially the early evening hours.

Discussion

It is first noted that the actual number of emergency room admissions has increased over the past two years, from approximately 2,400 cases per month in January 1965 to 2,800 cases in the same month in 1967. This is a 16% increase and could easily be explained as an increase in the population during the past two years. It is seen from Table I that the number of ob-gyn admissions has decreased from 28% of all admissions in 1965 to 6% of admissions in 1967. The reason for this difference is that obstetrical cases which receive prenatal care in the outpatient clinic are currently given a card which allows their direct examination within the hospital at term. There has therefore been subtracted from the usual number of admissions to the Charleston County Emergency Room a very large segment of cases previously examined in the emergency room. The fact that a majority of obstetrical patients are no longer being seen in the emergency room would tend to imply that a much greater number of patients having other diagnoses are being seen than is stated by a 16% increase over two years. In 1965, for example, there were 328 pediatric cases seen in the emergency room during one month. In 1967, there were 764 pediatric cases seen in the same period, an actual 100% increase.

The race populations have changed little in the past two years. From a county which is approximately 60% Caucasian, the number of admissions in 1965 were 70% Negro and 30% Caucasian. In 1967, 66% of the admissions were Negro and 34% Caucasian. The point was previously made that this predominance of Negro patients might imply a lower economic status or a more frequent reason for medical care. No effort has been exerted to discern this difference and the problem remains that the emergency room continues a disproportionate care to the two races.

In 1965 there were 96 patients seen per weekend day as compared to 71 patients per week day. In 1967 the ratio of 108 to 83, respectively, is a slightly but not significantly different figure. It appears that the emergency room will continue to be more heavily loaded on Saturdays and Sundays but this trend has not changed appreciably in the past two years.

From these figures, there is derived the fact that the Charleston County Emergency Room has not changed in its overall function with exception of the obstetrical cases in the past two years. It is quite obvious that even in two years the number of admissions to the Charleston Emergency Room has increased alarmingly. Implicit in these statistics is the fact that the Emergency Room continues to function as a pediatric clinic. The emergency room continues to show its high peak of ad-

Table I

	1965	1967
SURGERY	29%	35%
MEDICINE	29%	35%
OB-GYN	28%	6%
PEDIATRIC	14%	24%

Table I

The years 1965 and 1967 are compared relative to the diagnostic type of admissions to the emergency room. It was found by actual count that a change in obstetrical policy accounted for the greatest contrast in these figures (see text).

missions in the early evening hours and on weekends.

These statistics are presented in an effort to predict that the County Emergency Room will be eventually saturated with non-emergency conditions. The only means by which ideal care can be given to the truly emergency medical conditions will be the establishment of an area designed specifically for this purpose. It is advocated that the only reasonable means by which this can be obtained is the establishment of clinics to treat non-emergent conditions. The figures point to the absolute necessity of these clinics continuing into the evening hours. It is again reiterated that the emergency room should ideally be staffed and supplied on the basis of the type, number, and condition of the patients which it can readily be expected to encounter.

Summary

Approximately 2,800 patients were admitted to the Charleston County Emergency Room during the month of January, 1967. By techniques indicated, these patient records were analyzed in terms of age, sex, race, time and date of admission, and diagnosis. These figures were compared with a previous similar study made in 1965. The comparison of these two sets of figures would imply an accelerated number of admissions to the County Emergency Room during these two years and would suggest that clinics be developed to administer to non-emergent conditions. It is recognized that while these specific statistics apply only in Charleston, that their general aspects might allow insight into similar problems throughout the State.

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Regional hypothermia produced by cooling the blood within the intact artery. By Glenn W. Kindt. M. D. and Julian R. Youmans, M. D. (Charleston). Surg Forum 17: 4060407, 1966.

The goal of this study was to devise a method of producing regional hypothermia without using an extracorporeal circulation.

The cervical carotid arteries of goats were exposed. Heat transfer through the intact arterial wall and cooling of the intraluminal blood was accomplished by direct application of liquid nitrogen to the arterial wall and also by the use of a modified Cooper cryogenic probe. The carotid artery temperature, cerebral temperature, intracranial pressure, carotid artery flow rate and blood pressure were recorded during the intra-arterial blood cooling.

Result: In repeat studies with arteries of various sizes and differing flow rates, the intra-arterial blood temperature could be lowered an average of 6.5 degrees C. per linear inch of exposed artery prior to icing and occlusion of the vessel. Repeated applications of the cooling process were made without apparent damage to the vessels. Temperature reductions short of those producing icing of the vessel were used for up to four hours without apparent untoward effect.

A new method of producing regional hypothermia by cooling the blood within the intact artery has undergone preliminary investigation. It obviates the need for extracorporeal circulation. Quite probably the cellular elements of the blood receive less trauma than is associated with the systems requiring an extracorporeal circulation to achieve the cooling. This system of intravascular cooling has been proven to be effective in producing regional hypothermia of the brain.

THE THORACIC AORTA

PART IV. AORTIC ANEURYSMS

R. RANDOLPH BRADHAM, M. D.*
WILL C. SEALY, M. D.**

A thoracic aortic aneurysm is a potentially lethal lesion, as the natural history is usually one of progressive enlargement associated with many serious complications. The compressive effect on the trachea, bronchi, and lungs may compromise their function. Erosion through the chest wall or into intrathoracic structures as the bronchi, esophagus, and lung may eventually terminate in exsanguination. Dilatation of the aortic annulus and compression of the coronary arteries may lead to cardiac decompensation. For these reasons, the enlarging thoracic aneurysm should be resected.

The cause of thoracic aortic weakness and then aneurysmal formation are many, varying on the one hand from pyogenic bacterial invasion to arteriosclerosis on the other. The various etiologic agents may be combined and listed as follows:

1. *Degenerative* lesions of obscure etiology such as cystic medial necrosis and arteriosclerosis. The arteriosclerotic aneurysms are usually diffuse and occur at the level of or beyond the left subclavian artery. Those that are due to cystic medial necrosis are usually fusiform and located in the ascending aorta and arch. Bahnson and Nelson[1] called attention to localized aneurysms in the ascending aorta as a result of cystic medial necrosis.
2. *Infections* due to syphilis, pyogenic organisms, or fungi. Syphilitic infections usually involve the ascending aorta and sometimes extend to incorporate the innominate artery. Valvular disease may also become a part of the process. The production of periarteritis and mesarteritis of the aorta by syphilis causes destruction of the wall and dilatation, and results in both fusiform and saccular aneurysms. Lesions due to bacterial infections and fungi are uncommon and are usually in the sinus area, areas of constriction or in coarctation.
3. *Traumatic.* Thoracic aneurysms produced by trauma are becoming more frequent because of the rapid increase in automotive and air transportation. They occur most commonly as a result of sudden deceleration, though the same injury can be produced by sudden acceleration such as can happen when an individual is struck by an automobile. Of 72 cases collected by Strassman,[9] 40 were at a level immediately distal to the ligamentum arteriosum, 14 were in the ascending aorta just beyond the aortic valve, and the remainder were in the descending thoracic and abdominal aorta. The extent of injury to the aorta varies from intimal tears to complete severance. Intima and media tears with intact adventitia and pleura result in saccular aneurysms. These lesions usually allow survival and are amenable to surgical therapy. Gerbode and associates[7] reported four such aneurysms treated by resection with extracorporeal circulation with three survivors. Spencer and colleagues[10] reported one survivor in seven patients seen soon after traumatic rupture. Eight additional patients, who were found to have mediastinal masses after injury, were found to have traumatic aneurysms. Seven were treated by excision and replacement with a plastic prosthesis while the distal circulation was supported with

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left atrial-femoral artery bypass. The other patient was treated by tangential excision. Only one of these eight patients was treated unsuccessfully.

4. *Congenital* aneurysms occur apparently from an absence of the greater portion of the media in a specific location and can occur as a single entity, though most occur in association with some other congenital defect such as coarctation of the aorta.

Clinical Classification

Though of varied etiology, thoracic aortic aneurysms are best divided into three anatomical divisions, as each demands a singular operative correction.

1. Aneurysms of the Ascending Aorta.

These are now most frequently associated with cystic medial necrosis with and without the other stigmata of Marfan's disease. Syphilis as a cause is seen with decreasing frequency. Total cardiopulmonary bypass with a separate perfusion system for the coronary arteries is necessary for resection and replacement with a woven Teflon graft. Valve replacement may be necessary for aortic valvular insufficiency.

2. Aneurysms of the transverse or aortic arch with involvement of one or more of the arch vessels.

These are usually caused by syphilis, cystic medial necrosis, and congenital defects. Total cardiopulmonary bypass with separate arrangements for coronary artery and carotid artery perfusion is essential for resection and replacement with woven Teflon grafts when a direct operation is performed. If only the left subclavian artery is involved, the lesion can be handled as an aneurysm of the descending aorta.

3. Aneurysms of the Descending Aorta.

These are usually a result of trauma or involvement of the aorta with arteriosclerosis. For their resection, partial cardiopulmonary bypass is necessary. The aortic segment is replaced with a woven Teflon graft.

Diagnosis

The aneurysm is evident on plain x-ray studies of the chest, though occasionally even with the help of fluoroscopy to demonstrate pulsations and position of the esophagus, difficulty may be encountered in differentiating the aneurysm from a neoplasm. Hemoptysis occurs when there is erosion of the lung by the aneurysm. In addition to the primary diagnosis the following points may need to be clarified. First, the presence or absence of aortic insufficiency in ascending aortic aneurysms, and, second, the extent of involvement of the great vessels of the arch must be determined in order to plan the surgical approach. Contrast visualization by angiocardiography or direct aortography will aid greatly in clarifying the existence and extent of these factors which may be associated with the aneurysm.

Traumatic aneurysms warrant special consideration, as awareness that aortic rupture can occur with chest injuries is the first step in making the diagnosis. Unfortunately, some patients will have few symptoms and clinical findings suggestive of this serious injury. Widening of the mediastinum on chest roentgenograms is probably the most important diagnostic feature and when this is extensive or progressive, it may well be an indication of thoracotomy. Slight widening of the mediastinum is not diagnostic as this can occur from bleeding of minor vessels. Recurrent hemothorax, dyspnea, dysphagia, and hoarseness may be indicative of aortic injury. Aortography may be helpful when the patient's condition permits. All seven patients with acute injuries of the aorta reported by Spencer and associates[10] had widening of the mediastinum. Three had chest pain, three had hemothorax, and two were asymptomatic. In their group of patients dyspnea and chest pain were not diagnostic as most had rib fractures.

Those acute injuries that heal, usually become asymptomatic. Unequal pulses in the upper extremities would indicate residual damage. In some instances, hoarseness due to recurrent laryngeal nerve involvement or dyspnea may persist. Usually, the diagnosis is made because of a history of trauma and an aneurysm discovered on chest x-ray examination.

Treatment

The approach to aneurysms of the ascending aorta and arch must be well planned and individualized, as exposure is difficult in these locations. As a general rule, for aneurysms involving the ascending aorta, the midline sternum splitting incision offers the best exposure. For those involving the arch, the exposure is more difficult. A median sternotomy combined with a left anterolateral thoracotomy through the second or third interspace and a supraclavicular incision might be used to best advantage. Another approach that has been used advantageously is a bilateral thoracotomy through the right third interspace and the left fourth interspace with transection of the sternum and extension of the left thoracotomy further posteriorly for exposure of the descending aorta. For the distal arch and descending thoracic aorta, the left posterolateral approach with resection of the fourth rib is satisfactory.

Saccular aneurysms do not always pose the problems encountered with diffuse aneurysms and in some instances can be resected without having to cross-clamp the aorta or use extracorporeal circulation. If the neck is narrow and the greater part of the circumference of the aortic wall is not dilated or otherwise compromised, the aneurysm can be resected by cross-clamping the neck and without interrupting normal aortic flow. Great care must be taken when these aneurysms are manipulated, as the wall is often thin and friable and rupture is a constant threat. Proximal and distal control of the aorta should precede any mobilization of the aneurysm. If it is possible to resect the aneurysm at its neck, the neck is cross-clamped and closed with mattress or figure-of-eight sutures buttressed with Teflon felt strips when necessary. If there is reasonable doubt about the remainder of the circumference of the aorta at the site of a saccular aneurysm, it is best to resect the aortic segment and replace it with a graft. If a dilated segment of aorta remains, it is probable that the dissipation of hemodynamic forces will cause the dilatation to progress.

There is usually time to operate on acute injuries of the aorta if the diagnosis can be made early. Six of seven patients reported by Spencer and associates[10] with acute injuries survived twelve or more hours following injury. One of these was repaired successfully 37 days after injury. After the chest has been opened, isolation of the aorta proximal and distal to the hematoma should be accomplished for control in the event of rupture. Cardiopulmonary bypass with hypothermia is begun as soon as the aorta is occluded. The aortic tear is usually located just distal to the left subclavian artery. The most extensive part of the injury is on the intimal surface, necessitating opening of the aorta for accurate assessment and localization. The injured segment of the aorta is resected and a woven Teflon graft inserted. Great care must be taken to avoid injury to the esophagus, which is often incorporated in the large periaortic hematoma.

Those injuries that result in chronic aneurysms usually require resection because of symptoms and the possibility that expansion will occur even years later. Delayed rupture prior to four weeks after injury is not uncommon but rupture after that time is rare. Small chronic aneurysms that are asymptomatic may be observed if the patient has other disease which makes operation a hazard.

Resections of the aneurysms of the ascending aorta and the descending aorta would follow the techniques for dissecting aneurysms in these locations described in that section.

Resection and replacement of the arch of the aorta has been accomplished by both indirect and direct methods.

Indirect Operations

1. Muller, Warren, and Blanton[8] described a method of progressively inserting a vascular prosthesis without extracorporeal circulation or a shunt. A prerequisite for the employment of this procedure is that at least two centimeters of the ascending aorta be free of involvement of the aneurysm so that the prosthesis can be sutured to a segment of the wall that has been excluded by a partial occlusion clamp. Flow is maintained through the aorta initially and progressively shifted to the graft as side branches are sutured to the in-

nominate, left carotid, and left subclavian arteries. Brief total occlusion of the left carotid artery is necessary. A case was successfully done with this technique. Bjork[3] also used this technique combined with moderate hypothermia (28° C) successfully in one patient.

2. DeBakey[5] described a method of resecting the arch by first inserting a temporary shunt. Again, a prerequisite is that the proximal few centimeters of the aorta be free of involvement by the aneurysm in order that the proximal limb of the temporary shunt can be attached to the side of the aorta. The aorta proximal and distal to the aneurysm is mobilized over segments several centimeters in length. A prosthetic graft to which have been attached side channels for the arch branches is anastomosed to the aorta proximal and distal to the aneurysm end-to-side by using partial occlusion clamps on the aorta. The side arms are anastomosed end-to-side to the innominate and left carotid vessels. The aneurysm is excised and a definitive woven Teflon graft inserted. This is joined by side branches to the innominate and left carotid arteries while circulation is maintained through the shunt. The left subclavian artery is anastomosed to the prosthesis in an end-to-side manner. Flow is allowed to go through the definitive prosthesis while the temporary shunt is detached and the arterial defects sutured. At times, the temporary shunt can be maintained as a definitive prosthesis.

The advantages cited for these indirect methods is that cardiopulmonary bypass and systemic heparinization is not necessary. They have the disadvantages of being time consuming and cumbersome. They cannot be used when the proximal ascending aorta is involved nor when there is aortic valvular insufficiency. It is doubtful that these procedures will continue to be used with the increasing availability of total cardiopulmonary bypass.

Direct Operations

1. Resection and replacement with a prosthesis supported by total cardiopulmonary bypass is essential for those aneurysms that arise just distal to the aortic valve, those associated with aortic valvular insufficiency, and is a most useful method for all aneurysms involving the aortic arch. The success for this method has been verified.[2, 4, 5, 7]

The perfusion differs from ordinary cardiopulmonary bypass for the carotid arteries may have to be separately perfused and as in aortic valve operations, special plans have to be made for coronary artery perfusion. Cannulae are inserted into the carotid arteries initially in order to begin perfusion as soon as flow through them from the aorta is interrupted. The perfusion system to the carotids can be controlled by a separate inflow pump apparatus obtaining the arterial blood from the oxygenator. The pressure should be monitored and kept at levels of 120 to 140 mm Hg systolic pressure. Flows of approximately 400 ml per minute per catheter are needed. Temperatures of 30-33° C are helpful and permit unhurried cannulation of the carotids. A short segment of the aorta distal to the aneurysm is mobilized and is made ready for anastomosis with the distal end of the woven Teflon arch graft to which side branches for the arch vessels have previously been sutured. The innominate, left carotid, and left subclavian arteries are cross-clamped and transected after the patient has been put on complete cardiopulmonary bypass. Coronary perfusion can be accomplished by a single catheter placed through the aortic wall just distal to the valve if the latter is competent or by direct catheterization of each coronary artery. An anastomosis is made between the distal end of the arch graft and the distal aortic segment. The arch vessels are then anastomosed to the side branches of the aortic graft beginning with the left carotid or left subclavian. The left subclavian can actually await insertion of the graft and can be anastomosed end-to-side at the end of the procedure by the use of a partial occlusion clamp placed on the aortic graft. The clamp occluding the distal aorta is removed and progressively moved retrograde along the graft and placed proximal to each arch vessel as the anastomosis is completed. This allows perfusion of the carotids through the graft as each is anastomosed to the graft. The proximal aorta is transected and cannulae are inserted into the coronary artery ostia when perfusion had previously been through the proximal aortic wall. For their perfusion, oxygenated blood is passed through a separate pump and heat exchanger so the pressure can be varied and the blood cooled to 10-15° C. As much of the aneurysm is resected as can be done safely. This might entail removal of the entire aneurysm or just the anterior wall when the posterior wall is adherent to the structures in the mediastinum. The proximal anastomosis is performed and coronary perfusion stopped as it is completed. All of the anastomoses must be done with great care as bleeding from them is one of the major complications of this operation. Usually 4-0 and 3-0 arterial silk are used and the sutures are placed close together. Teflon felt strips may be used to buttress the suture line and interrupted sutures are used where necessary. It may be necessary in some cases to telescope the graft into the aorta and effect an overlay of several millimeters which will allow a double layer anastomosis.

Complications

The most common complication is that of postoperative bleeding. This often occurs through the suture holes and through the interstices of the graft even though woven grafts are used. All clotting factors should be evaluated and any defects repaired. Re-operation is indicated for securing hemostasis in the operative wound when blood loss is excessive. Another complication is that of cerebral damage due to inadequate perfusion or thrombosis of the cerebral vessels as a result of the cannula or compromise by the anastomosis. Cerebral edema occurs infrequently and may be a result of high perfusion pressure. Damage to the esophagus should be carefully guarded against, especially when there is a traumatic aneurysm with a large hematoma distorting the anatomy in this region and making identification of the esophagus difficult. With aneurysms involving the arch and low descending aorta, the esophagus is vulnerable by virtue of its juxtaposition.

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X-RAY FILM OF THE MONTH

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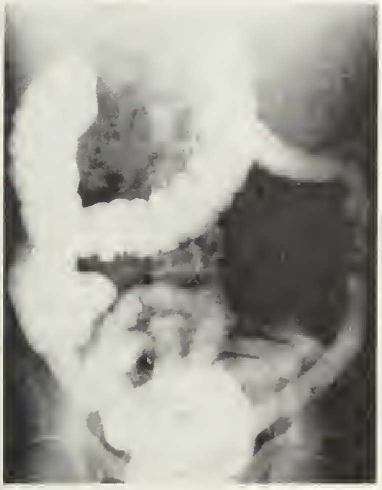

Figure 1
Barium enema outlining spleen.

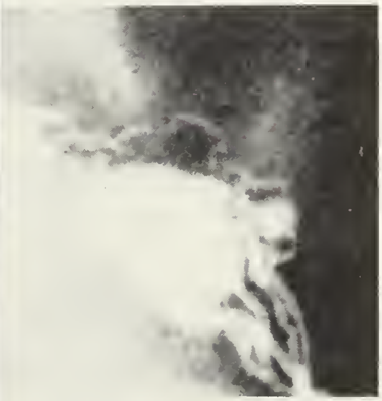

Figure 2
Lymphangiogram
Typical vessels and node.

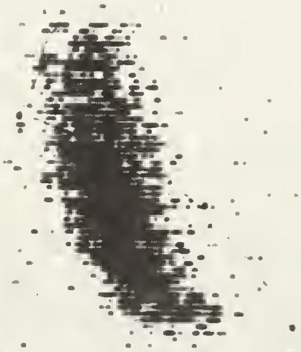

Figure 3
Splenic scan.

These radiological studies were performed on a 45 year old male who approximately 11 weeks previously had developed intermittent lower abdominal pain which lasted one week, plus a dull steady persistent left lower quadrant pain which radiated to the left aspect of his back. Five weeks later he suddenly developed extreme weakness, nausea, and an increase in his back pain. He was thought to have a kidney infection and was treated with antibiotics without improvement. Following the development of signs and symptoms of pneumonia in the left lung base he was hospitalized and found to have splenomegaly (Fig. 1) and anemia. His temperature course was that of afternoon elevation of 101° to 102° which finally disappeared after 3 weeks. His anemia was noted to improve on iron therapy. Blood studies including the bone marrow examination showed no evidence of a leukemic process. A weight loss of 33 pounds occurred during this 11 week period, however, the patient was on a weight-losing diet. On close and repeated questioning, the patient remembered striking his left upper quadrant area shortly before all this began.

When referred to the Medical College the patient generally seemed to be improving. As the diagnosis was in question, a lymphangiogram was performed which demonstrated a normal course and caliber to the lymphatics and a normal appearance to the lymph nodes. (Fig. 2) A splenic scan was then done using the patient's own heat sensitized red cells labeled with radioactive chromium. These are selectively picked up by the functioning portion of the spleen. (Fig. 3) Thus, one demonstrates the larger portion of the so called splenic shadow to be a "cold" mass which was interpreted as a hematoma.

On splenectomy, a large left upper quadrant mass measuring 25 x 17 x 5 cm was encountered. The inner aspect was composed of functioning spleen and the large outer portion represented an organizing hematoma of the adjacent left upper quadrant.

It is generally stressed that anyone receiving injury to the left upper quadrant of the abdomen or left lower chest should have the possibility of splenic rupture considered. This history plus signs and symptoms of bleeding into the peritoneal cavity form the basis of the diagnosis. If the patient forgets the injury, as almost happened here, one can easily be lead astray. Peculiar to the spleen is a phenomenon that trauma may produce a subcapsular hematoma which does not rupture and does not produce signs and symptoms of intraperitoneal hemorrhage until late. The incidence of delayed rupture of the spleen as compared with acute rupture is approximately 1 to 6; 75% of the delayed ruptures occurring during the first two weeks. Rib fractures are seen in less than 20% of the cases and are even less frequent in children. This case primarily is of value in demonstrating the more unusual aspects of splenic rupture and how the newer radiological techniques can aid in establishing a diagnosis.

Farmer's lung. C. Molina et al. Munchen Med Wschr 108:1872-1879 (Sept 23) 1966.

Twelve cases of farmer's lung are reported. The disease occurs more frequently than assumed and results from working with moldy hay or other plants. Two forms have been distinguished: the acute form with fever, cough, and dyspnea, and the chronic with bronchopneumopathy or fibrosis. The x-ray film showed in typical cases miliary aspects. In respiratory function tests oxygen saturation of hemoglobin will be observed, a hint to the presence of an alveolocapillary block; an obstructive syndrome of the bronchi was not observed. The diagnosis depends on the immunoelectrophoretic proof of specific bands which are characteristic for moldy hay and especially for *Thermopolyspora polyspora.* Pathologicoanatomically, farmer's lung is a diffuse interstitial granulomotosis with hyperergic pulmonary reactions when moldy vegetable substances are inhaled. In the acute phase bronchitic asthma should be considered in the differential diagnosis, while in the chronic stage other causes of a miliary aspect and pulmonary fibrosis should be considered. The treatment depends mostly on the removal of contact with the irritant.

Iatrogenic factors in infectious disease—H. N. Beaty and R. G. Petersdorf. Ann Intern Med 65:641-656 (Oct) 1966.

Iatrogenic diseases not only result from carelessness or malpractice but may be a consequence of sound therapeutic or diagnostic procedures. Illustrative case reports show some of the common causes of iatrogenic disease in patients encountered on an infectious disease service. These include toxic and allergic manifestations of antimicrobial therapy, the problem of superinfections and hazards of selected diagnostic and therapeutic procedures. It has been estimated that 50% to 90% of the time antibiotics are administered without clear indications. Fifty-one percent of iatrogenic complications are due to administration of drugs, primarily antimicrobials. Superinfections may occur in chronically ill, debilitated patients whose mechanisms of resistance are altered by either the basic disease or the administration of drugs. However, these infections may also occur in relatively healthy patients during the course of antimicrobial therapy. Even relatively simple maneuvers may be associated with major complications, and increasingly complex procedures in seriously ill patients compound the risk of iatrogenic complication.

President's Page

Recently there appeared in the *Journal of the American Medical Association* a committee report suggesting how the shortage of physicians might be relieved. Shortage of general family doctors was given particular concern.

Without considering here whether there is a shortage of physicians, an unfortunate emphasis on research, monopoly of too many physicians by the government in civil and military work, or a cause-and-effect shortage of family physicians in smaller towns based on the economic facts of life (each of these theses could be heavily defended in argument) there is one thing of which I feel sure. That is that the solution submitted to the AMA is no solution at all. The proposal was to add two more years on to the physician's training and make him a sort of super general physician. I think this would really be the death knell of the family physician. Add it up: twelve years to get out of high school, three or four to finish college, four to finish medical school, two years to complete military service, and the proposed *three* years training recommended by the above committee.

Men with that much training, men with that many years behind them, and men with relatively fewer years to look forward to are going to feel compelled to go to the larger places in an effort to make a living. Most such men would be mediumly well trained in surgery and would probably do all the surgery they could get and do it mediumly well. They would probably do general practice and/or other specialties the same way—and do them all mediumly well. One cannot do all things and do all things well. Mediocrity is no answer.

Men so trained would hardly go to the smaller places at all because there would be no hospital or only a small one there. A small hospital would have a small staff—it could not support a urologist, an obstetrician, an ophthalmologist, a chest surgeon, an abdominal surgeon, etc. Yet no surgeon should start an appendectomy unless he is prepared to convert it into a spleenectomy or nephrectomy at a moment's startling notice when there is no time to call to a neighboring city for help. Men trained pretty well in everything but artistically well in nothing are not the answer—unless they have immediate access to the artist in each specialty.

My feeling is that we should lower the standards of entrance to medical schools slightly and take men with two or three years undergraduate training, give them four years in medical school, and one year in a good rotating internship, and let them go to work in private practice. They could handle excellently eighty to ninety per cent of all illnesses. The balance they could recognize as needing specialty care and they could easily refer them. Many such men would probably be all too willing to locate in smaller towns, even where there was no hospital, since they would have little use for one.

The small places are demanding physicians—just good, average physicians. They are not demanding specialists. If we don't furnish them they are going to elect to office legislators who will pass bills allowing not only osteopaths to fill the void but probably others not that well trained. The cry is for a physician, some physician, *any* physician. Let's fill the void instead of deepening it.

Norman O. Eaddy, M. D.,
President

Editorials

Clinical Investigations and the FDA

The arbitrary regulations of the Food and Drug Administration have caused concern in many quarters. An editorial[1] says:

"Many investigators have been pondering the effect of the policy statement of the Food and Drug Administration regarding the use of investigational drugs on humans. In fact many have even decided to abandon their interest in a field in which they have spent a great part of their professional life. This is, indeed, most unfortunate.

It seems to me that the issue at the moment is the question of whether or not the public's interest is better served by rigid controls or if, in fact, the public may be the loser because of the regulations. The real issue is how many lives were lost in the past because of the lack of FDA regulations versus how many lives will be lost because the investigator is not permitted, or does not feel that he is permitted, to investigate because of these restrictions. It would, indeed, be tragic if more lives were lost because of the existence of too many regulations."

Not a few examples of illogical refusal of legitimate proposals for testing of drugs can be cited.

The FDA rule that patients receiving new drugs or placebos must be so informed makes evaluation of effects extremely difficult. Judgment of procedure in such cases might well be left to conscientious investigators, or to a local non-governmental research committee, whose combined consciences should be an adequate safeguard.

Under FDA control the valuable support of investigation by the pharmaceutical industry has been seriously discouraged, to the detriment of the public. It seems high time that the present controllers be properly controlled.

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[1] *W. E. Herrell, Clinical Investigations: Why Make It More Difficult? Int Med Dig 2: July, 1967.*

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Medicare and Medicaid Modifications

A certain amount of informed scuttlebutt seems to seep out of the House Ways and Means Committee in Washington to the effect that some desirable changes of regulations are fairly likely. First, substantial cutbacks in Federal Participation in Title XIX seem probable. Then the Part C proposal to handle payments of hospital-based specialists and outpatient diagnostic benefits seems to be out. Certain deductibles may be eliminated. Itemized doctors bills will be acceptable for making claims. Trial of new methods of reimbursement are to be permitted.

A glimmer of encouragement of the hope for improvement (but not the decease) of these programs seems visible in the beaurocratic fog.

* * *

The Eclectic Medical Practitioner

After a touch-and-go experience in the legislature, the bill to expand the privileges of the State's one and only "eclectic" practitioner received its coup-de-grace at the hands of a wise House.

The strange proclivity of our legislators to wishing to bestow special privileges on people in no way equipped to use them safely seems to make an annual appearance. So obvious is the thought that attainment of recognition requires hard work and official approval that it is hard to swallow what seems to threaten to be an unthinking concession to personal influence.

Eclectic medicine is a form of practice long abandoned and no longer taught. It is not akin to osteopathy, another type of practice which is promoted annually as fit for equality with our kind of medicine. Osteopathic practitioners have not been able to show that their education is equal to ours, or their skills comparable. In this matter, the answer is simple: to require properly approved educational facilities before extension of privileges of practice can be considered.

Most of us are aware of this, but many of our legislators seem to be singularly obtuse in this matter. It is none too early to begin to educate them in preparation for another osteopathic drive at the next session.

Medical Examiners

For some years the Association has promoted the establishment of a Medical Examiners Commission to investigate violent and unexpected deaths.

Again in this session the legislature took no action on a bill aimed at this arrangement. Apparently the stumbling block was the necessary money.

This lack of success should not discourage the Association from continued efforts to attain a worthwhile service already available in so many states.

Recent Changes in Pediatric Practice

Within the last few decades while babies and children have remained essentially the same as regards anatomy, physiology, and psychology, the diseases with which they are commonly afflicted have markedly changed. That is, some once extremely frequent are now rare or almost extinct, while on the other hand other diseases previously unrecognized or considered rare are now known to be common. An example of this is the rather common condition called erythroblastosis.

Not long ago it was not unusual to see a patient who had diphtheria, typhoid fever, tetanus or malaria. Today these diseases are rarely encountered.

However, we now know that hyaline membrane disease does occur in the newborn. Not so long ago mucoviscidosis was unrecognized. At first it was called pancreatic cystic fibrosis. Unfortunately, this serious malady is not rare.

Today much attention is being paid, and rightly so, to abnormalities in the psychology of the child. The claim is made that many juveniles can, after some study and treatment, be made into useful citizens and thus society be saved the burden and expense of caring for delinquents and some criminals.

Inasmuch as some diseases are not reportable, whereas deaths are, the mortality statistics are more reliable than those of morbidity.

Let us briefly consider the changes in incidence or in mortality in a few diseases once very common.

In 1922 Gaston Ramon of France introduced diphtheria toxoid. First it was used as a test of susceptibility to diphtheria. Soon after Drs. Park, Zingher and Schick in the USA began using it modified or in combination to produce immunity. This has brought about a great decrease in a once common and dangerous disease. In South Carolina from 1935 through 1939, there were 3,497 cases of diphtheria. From 1945 through 1949 there were 2,306 cases and 1955 through 1959, 444 cases. In 1964 only 8 cases of diphtheria were reported in the entire state. Diphtheria prevention is now routine.

Typhoid fever in South Carolina, a few decades ago, was a veritable plague. It would be difficult to get the morbidity or mortality figures to document this but the older doctors do vividly remember that era. However, going back only about 30 years, we see than in this state between 1935 and 1939, there were 2,754 cases. From 1940 through 1944 this had dropped to 821. In South Carolina in 1960 there were 19 cases and in 1965 only 9 cases were reported in the entire state. What brought about this tremendous decrease? There were two factors. Undoubtedly better sanitation was one, but probably the injection of typhoid vaccine had even greater value.

Colonel Frederick F. Russell of the United States Army, following the Boer War first used it in 1909, and then made it compulsory in the United States Army in 1911.

While at no time has the mortality in children or adults from poliomyelitis been high even during wide-spread epidemics, yet the resultant paralysis has been very evident and usually permanent. This author had under his care a large number of patients at the Boston City Hospital during an epidemic in 1917. For a great many years, notwithstanding theories and investigation here and abroad, its origin remained unknown. Through patient and brilliant work in the laboratory, especially at Harvard, by J. R. Enders and others, a virus was proven to be the cause. Later three types were recognized.

In 1954, Jonas Salk, an American, introduced the Salk Vaccine. This was given subcutaneously with good results as a preventive. However, not much later, in 1961, Albert Sabin, also of the United States, after considerable research in Cincinnati began giving, on a large scale, live polio vaccine by mouth. This, today, is the usual procedure.

Because of the use of these vaccines poliomyelitis in the United States as an infectious disease is a rarity. A few figures show the marked decrease in incidence.

In 1948 in South Carolina there were 381 active cases of poliomyelitis. In 1955 there were 431 recognized new cases, but in 1960 there were only 130 afflicted.

Looking at these figures differently we find that before the advent of the Salk vaccine in a 5 year period, the yearly average in South Carolina was 220, while after its use the number of cases in a five year period dropped to 98. However, in 1964, after the introduction of the oral Sabin vaccine, in South Carolina there were 3 cases of "polio" and in 1965 only one.

* * *

In this brief sketch only three diseases conquered by medical science within recent years have been discussed. However, there are others such as infantile diarrhea and malaria once common in South Carolina but no longer are encountered.

Even so, the average physician, whether he be a generalist or specialist, still finds much to be done in the still unconquered diseases.

R. M. Pollitzer, M. D., F. A. A. P.
Greenville, South Carolina

The author of this editorial extends his heartiest and most sincere thanks to the South Carolina State Board of Health for supplying some of the South Carolina statistics on morbidity and mortality.

* * *

Doctors and Nurses

The American Medical Association's policy-making House of Delegates has reaffirmed the Association's support of *all forms of nursing education programs.*

At its June 1967 biannual session in Atlantic City, the House adopted the following statement on nursing education:

Whereas, The American Medical Association is on record to "continue its support of *all* current nationally approved educational programs for nurses;" and

Whereas, The national trend which is supported by the professional nurses' associations appears to be the gradual phasing out of the diploma schools of nursing and the transfer of nursing education to collegiate institutions; and

Whereas, 70 per cent of nursing care at the present time is rendered by graduates of diploma schools with the demand for such nurses continuing to exceed the supply; and

Whereas, There is general professional agreement on the need for inclusion of nursing education in community health planning with provision for greater use of in-hospital training as well as training in collegiate institutions, therefore, be it

Resolved, That the American Medical Association reaffirms its support of all forms of nursing education including baccalaureate, diploma, associate, and practical nurse education programs; and be it further

Resolved, That those hospitals that conduct diploma schools of nursing be commended for the great contribution being made by these institutions to the health needs of the nation; and be it further

Resolved, That such hospitals be urged to continue their schools and increase enrollment while allowing the individual to choose the kind of nursing education he or she desires; and be it further

Resolved, That the American Medical Association take appropriate action in consultation with professional nurses' associations and the American Hospital Association to encourage increasing enrollment in diploma schools and at the same time improve educational standards.

ABBREVIATED MINUTES
OF THE ANNUAL MEETING
South Carolina Medical Association
MAY 8, 9, 10, 1967

(Continued from August Issue)

The Committee on Industrial Medicine.

Dr. J. H. Jameson, Chairman: The report of the Committee on Industrial Medicine appeared in the Journal and I would like to give some additional information. You know, the full work of this committee, this year, has been the formulation of a new industrial fee schedule. That schedule appears about to be approved. I have been in communication with Mr. McMillan, the Chief Commissioner and he tells me if there are no objections by the 15th, when they have the next meeting of the full commission, it will probably be approved.

Copies of this fee schedule were sent out to the Chamber of Commerce, labor, the AFL-CIO, various insurance companies carrying compensation insurance. The only one that they have heard from is the Chamber of Commerce and they object to the new fee schedule. If, however, we don't hear from them by the 15th it will probably be adopted. Thank you.

The Chair: Thank you. Dr. Jameson.

How many members in here are members of the State Chamber of Commerce (several hands were raised) not many. I thought if you were it would be well to write them and tell them there is no reason why doctors should subsidize industry coming into this state. Charlie Daniels has never cut down on his percentage that he makes; the real estate men don't reduce their percentage any. I don't see why the Chamber of Commerce should object to doctors getting their fee. I think if you would write them a note it might have some effect.

Dr. Joseph D. Thomas, Chairman: There is just one error I would like to correct on Page 158 of the Journal where the new districts are outlined—it should be Orangeburg and Richland, rather than 'mond' Richmond, and I would like to remind the Chair to refer the constitutional changes that were tabled last year to the committee which he referred to before today.

The Report of the Benevolence Fund.

Dr. Tom Goldsmith, Chairman: Mr. President and members of the House of Delegates, I just have a brief report to make, so it won't take too long, I just have forty pages (holding up a sheaf of notes). First I want to thank the Chesterfield County Society for presenting the resolution that they have this morning in support of the Benevolence Fund. Recently a letter was sent out by me to all the county societies requesting that they make donations from their county societies. I think Chesterfield has gone us one better and each man is doing it himself. I would like to remind you that donations to this are tax deductible because it goes to the organization instead of an individual.

Before I read my supplementary report. since this is the expiration of my term. I want to take the opportunity of thanking your various auxiliaries for their support throughout the years and to each individual who has contributed and to the county societies. I might mention that on this letter that went out. I haven't gotten a tabulation but I have a word report on it, the support has been very good. Donations have ranged from $20.00 up to $250.00 from the various county societies. I want to take this opportunity, too, to thank the previous members of all the committees and the members of this committee. The first committee members were Dr. Benny Mayer, Dr. Billy Smith and myself. and I want to thank Dr. Benny Mayer and Dr. Smith for their cooperation. and since then Dr. Lemmon has served on the committee and I want to thank him for his support. The present committee. Dr. Pettit and Dr. LaRoche, have given splendid support and I thank them. Finally but not least I want to thank the South Carolina Medical Association for allowing me the privilege and honor of having served on this committee since it was instituted.

The report I have shows a number of contributions that have come in since January 1st, which will be included in the annual report for 1967, but I would like to read these if I may have your permission, Dr. Johnson.

These are from the various auxiliaries, contributions received since January 1, 1967.

Edisto-Orangeburg Auxiliary	$ 10.00
Anderson County Auxiliary	15.00
Greenville County Auxiliary	100.00
Charleston County Auxiliary	108.50
Spartanburg County Auxiliary	25.00
Greenwood-Abbeville Auxiliary	10.00
Oconee County Auxiliary	5.00
York County Auxiliary	25.00
Sumter-Clarendon Auxiliary	10.00
Horry County Auxiliary	5.00
Newberry County Auxiliary	5.00
Richland County Auxiliary	50.00
Pickens County Auxiliary	5.00
Total	$373.50

Respectfully submitted,
Thos. G. Goldsmith, M. D., Chairman
Harold S. Pettit, M. D.
Ripon W. LaRoche, M. D.

Since this report I have received checks from some of the auxiliaries that are not included in this but volume to our Blue Cross business. The Part B is very close in terms of dollars and numbers of claims to our Blue Shield. In all, on an annual basis we are paying in the neighborhood of about thirty million dollars a year and we are processing in the neighborhood of about 34,000 claims per month.

Now, actually the four parts are very close in terms of numbers of claims and dollar volume. They are not that comparable in terms of the number of people required, nor the time put on it by executive personnel. Of course, during the first year in the tuning up period the requirement in time for personnel was quite heavy all the way through. Now that the programs are established and the people are trained, I would say, as far as our top people are concerned, we probably spend maybe 5% of our time and that is in just general supervision of the Medicare operation. The demands are not heavy now, of course, as they once were. As for the majority of executive time, it is of course spent on the Blue Cross and Blue Shield and we handle them so closely together it would be difficult to make any kind of a separation as far as effort is concerned. We treat them as one and the same and look on them in that way.

As far as the effect of our giving up the job on either one of them, it would merely be a matter of just stopping doing what we are doing and the people who are directly involved with the programs would either have their employment terminated or they would have to be absorbed somewhere else in the organization, and that would be that. If we were to give up the role of Carrier under Part B it would have no effect whatsoever on Blue Cross or on Blue Cross' administration of Part A. They are totally different operations, to a degree—as you can see we have the 12 people working on both—it would be a matter of just assigning them to Part A and going on with the program. Part A is a totally different type of an operation; it is set up totally differently so that the effect administratively is that we would just stop doing it.

Dr. Boniface, Charleston: If Blue Shield begins operating under the new enabling legislation will they start paying regular and customary fees?

Mr. Sandow: I would say "no". Well, for almost a year now we have had on file with the Insurance Department a Blue Shield Contract which would pay 'usual and customary'. It has not been approved. Presumably, if we had our enabling legislation changed, approval would be given to our writing that particular type of coverage. But, I think it must be understood that whatever Blue Shield pays in terms of the fee schedule is determined by what the public buys for coverage. If they are willing to buy, at the rate that is required, a program that would pay usual and customary fees then we would pay it. But the determination of what we would pay basically is made by the buying public and not what we perhaps would like to do or think we ought to do. In the end it is the person who determines how much he is willing to pay in terms of premium that determines what the level will be. We do everything we can to sell as high a level schedule as we can but sometimes we are not successful.

Dr. Tom Whitaker, Greenville: I would like to know if you are having much trouble processing the claim forms for those patients who pay their physicians by direct billing and, if so, what seems to cause the problem. In our private practice of radiology we have a large number of these patients and almost all pay us the full fee and the girls send out the claim forms for them. I was just wondering about these people who come to our office, what problems you might have with our patients in that respect?

Mr. Sandow: Well, many times, particularly the elderly people, it is extremely difficult for them to fill out the claim forms themselves. Many times we receive them with totally inadequate information. Many times they are practically illegible and then it is necessary that we contact both the physician's office and the patient in order to get the necessary information for processing the claim.

There is no question about it that the majority of our major administrative problems, with the Medicare deal, come with the unassigned claim improperly filled out. Many times the bill won't give us the information.

Dr. Tom Whitaker: I would like to make a comment there. This direct billing is great, we have had virtually no problems in our private office. I would like to make an impassioned plea to this group that they carry word back to their offices and please use direct billing.

Dr. Mack S. Bonner, Aiken: I hear a lot of insurance men, at least ten, who sell service contracts competing with Blue Cross-Blue Shield and so many of us don't understand service contracts. I know my girls get in trouble in their billing. It seems to me if Blue Shield is going to continue to push service contracts that the physician should be more aware of what companies have service contracts.

Adjournment

(Following adjournment of the Corporation)

The President-elect is escorted to the rostrum.

HOUSE OF DELEGATES RESUMES

Dr. Norman Eaddy, President-Elect: Mr. President, members of the House of Delegates, ladies and gentlemen, there is a very real danger that physicians will lose faith in the magnificence of their profession because of constant harassment by misled, misinformed and sometimes downright vicious critics. We see no danger in nor do we resent, rather we welcome criticism from those seeking improvement in the profession but there is danger in the often skillful, frequently subtle, usually camouflaged activities of those who would destroy our profession as it is presently constituted.

The medical profession is the most magnificent the world has ever known. To be chosen president of the South Carolina Medical Association is an honor that could hardly be surpassed. I want you to know I do not regard lightly your having shown me this kindness. I shall endeavor to demonstrate my appreciation by making you a good president.

The presidents who have preceded me have set the example I shall try to copy. We have indeed been blessed (heretofore at least) with men of remarkable ability.

Now, if we are tempted to think times are impossibly difficult we should realize this is not so. Times have always been difficult. War, slavery, and catastrophes saturate all of history. It is not up to us to wring our hands and bemoan our fate. We should stand up like men and *determine* our future. Quoting Mordecai in the biblical book of Esther '. . . who knoweth whether thou art come to the kingdom for such a time as this.' Let us be guided exclusively by what we think is right. This might be the very time for which we have been placed on this earth. Considering ambitious, ruthless politicians as the counterpart of the king in Esther's day let us say, like her, '. . . we go in unto the king . . .: and if we perish, we perish.'

Courage is needed by all of us—and wisdom and divine inspiration. Fortified by these let us act like men, ignore the usually foolish accusations and condemnations hurled at us by *little* men, and perpetuate the magnificence of the medical profession—the most magnificent the world has ever known.

No one of us can do this alone. But all of us, acting together with esprit de corps, with love for humanity, and with integrity, can move mountains and thus prove to the world that the past, which proved the medical profession supreme, is no more to be admired than the present and the future. Ours has indeed proved to be the greatest profession. You and I can keep it so. With your help we will.

I look forward to serving you as president and thank you very much, indeed. (Enthusiastic applause)

The Chair: The stirring remarks of our President-Elect will be referred to the Reference Committee on Reports of Council and Officers.

Mr. M. L. Meadors, Executive Secretary:

Membership in your Association increased last year by 54, net. Eighty new members joined during the year. Eight former members were reinstated, and we lost thirty-four by death or otherwise. Of the total number, 1621, in good standing last year, 1457 were paying members, 15 were Junior members paying only the $3.00 subscription to the Journal. 136 were Honorary members exempt from payment of State dues, and 13 were Service members, also exempt from payment of State dues.

We had 1383 members who were also paid members of the American Medical Association, 130 were active members of AMA but exempt from payment of AMA dues, and our 15 Junior members held Associate Membership in AMA.

So far this year, a total of 1282 members have paid dues to the State Association and 1188 have paid AMA dues.

Contributions to the American Medical Association Education and Research Foundation have continued about as in previous years. The amount collected and remitted for this purpose last year was $5,885.00. By far the major portion, of course, was in items of $10.00 per member as requested on our bills as a voluntary part of the dues. Of the members who have paid dues in 1967, a total of 390 have contributed $3,910.00 to AMA-ERF.

Last year, as directed by the House of Delegates and Council, dues to SCALPEL, in the amount of $20.00, were included on the bills to the members, as a voluntary, non-tax-deductible item. Last year we received and remitted to the Treasurer of SCALPEL $4,105.00, representing 205 of these payments. So far this year we have received SCALPEL dues from 200 members.

The administration of the business affairs of the Association has continued as in previous years.

The finances of the Association, all records of which are handled by the Treasurer through our office, will be covered in some detail in his report.

Our legislative interests, this year, so far have been confined to three Osteopathic Bills, which were introduced early in the session. It will be recalled that last year the House Committee on Military, Public and Municipal Affairs, after consideration throughout the 1965 and 1966 sessions of a bill to redefine the practice of Osteopathy and make it equivalent to the practice of medicine, brought out near the end of the session a report which would have added an osteopathic member to the State Board of Medical Examiners, and provided for the issuing of licenses, to doctors of medicine and osteopaths, by this Board. No serious effort was made, however, during the 1966 session, to pass this Committee report and it died with the close of the session last year.

This year, the friends of the Osteopaths launched a three-prong attack. The first bill, H.1116, was similar to the bill introduced in the previous General Assembly, and redefined Osteopathy so as to make it virtually the same as the practice of medicine. The second, H.1117, would have authorized osteopaths to prescribe, dispense and administer drugs and narcotics of all kinds. The third, H.1118, was along the lines of the Committee's report of last year, and was designed to add an osteopath to the Board of Medical Examiners. All applicants for licenses in medicine or osteopathy, would have been required to pass the examination of the Board, under this bill. Doctors of medicine would have given the examinations in the medical subjects, and the osteopath member would have examined those applicants seeking to practice osteopathy, in the special subjects included within the original concept of that profession.

The bills, all authored by the same representatives, were referred to the Committee on Military, Public and Municipal Affairs. Public hearing was requested and held. Officials of the American Osteopathic Association, including its general counsel, were on hand for the hearing. Very shortly thereafter, the three bills were reported favorably by the Committee, but the report was divided, minority unfavorable.

In due time they were reached on the calendar, and at first our prospects were not good. Physicians in every county of the state, however, were alerted and they responded wonderfully. Members of the House were contacted in their home counties and the objections to the bills explained. It was pointed out that the medical profession sought only to insure that applicants for license to practice medicine, under the name of osteopathy, be required to be graduates of schools having the same high standards and accreditation as the approved schools of medicine. The result was gratifying. I would like to interpolate here, again, emphatically, that that is the sole argument that has been used throughout the past two or three years and it is the one which we believe is the consistent and the only basic argument which we can use and which we will continue to use in the future. We do not oppose the osteopaths, per se, but upon the ground that there is no assurance that their medical education is of the same high standard and quality as those of the graduates of approved medical schools. The result of this alerting of the doctors over the state and their activities was very gratifying and all three bills, after brief debate, were laid on the table and thus killed by a substantial majority of the House of Representatives.

I want to correct Dr. Johnson a little bit, though, so far as my home town is concerned and headquarters of the association—it is true, Dr. Johnson, that on the vote on the first bill we had only one member of the Florence Delegation to vote with us, but a week-end intervened and by the time we reassembled the next Tuesday all four Florentines were with us. We did a little homework in the meantime. (Applause) It may take a little doing to get the Florence doctors stirred up but it can be done.

The proponents of these bills were not happy with the result, and they included some important legislative leaders. They let it be known that this was not the end of the struggle. A short time later, a concurrent resolution was introduced in the House, providing for a study of the licensing of osteopaths of the state, and a full investigation as to whether or not the osteopathic law should be broadened. The study and investigation would be made by a nine-man committee, three to be appointed by the Speaker of the House, three by the President of the Senate, the other three to include the President of the South Carolina Medical Association, the President of the State Osteopathic Association, and the President of the Medical College of South Carolina. The resolution provided for a sum of $5,000 to defray the expenses of the investigation and the committee was directed to report not later than February first, 1968. The resolution was referred to the same committee of the House, from which it has not emerged.

It will be recalled that two years ago, a similar committee, though not identical, was provided for under a resolution and was actually appointed. That committee, however, never made a report. From the foregoing and our past experience, we think it is evident that the osteopathic problem is still with us and will probably continue to be. The basic reason for the strength of the osteopaths in the legislature lies in the fact that many of the members believe there is a serious scarcity of doctors in South Carolina. They have been led to believe that organized medicine intentionally limits the number of doctors of medicine, and broadening of the osteopathic law would materially increase the numbers of doctors qualified to render medical service in the state, that most of these would engage in general practice, and that they would fill the scarcity existing in many rural areas and small communities.

We believe it is important that the members of this Association recognize the effect of these arguments, and be prepared to meet them in your continuing conversations with your legislators.

We believe that the proposal for investigation by the committee referred to, is basically good, particularly since the committee would include within its membership the President of this Association and the President of the Medical College of South Carolina. The resolution will probably pass, and it may afford an opportunity for us to convince the legislative members, of the committee, that any shortage of doctors in the state is not the fault of the organized profession and it will not be remedied by the broadening of the licenses of the osteopaths.

We have undertaken to assist and cooperate in every way possible with the liaison committee on the study of implementation of Title XIX of Public Law 89-97—the portion of that law providing for Welfare services. This subject is still under study by the committee, officials of the Department of Public Health, and the Department of Public Welfare. At the present time it appears that it may be possible to implement the basic provisions of Title XIX without the passage of new legislation this year. Extension of its provisions to all of the areas necessary in order to enable the state to continue to participate in the grants of federal funds for Welfare purposes after the deadline several years hence, will require appropriations of vast sums of money by the state, and the matter must continue under the close scrutiny of the leaders of this Association.

We cooperated with Dr. Waring, Chairman of the committee on Public Relations in the organization and holding of the Conference of County Medical Societies early this year. The program was worthwhile, but the attendance meager, and we would like to urge the members of the House and all other physicians to try to stimulate interest in this Conference. It is a sort of interim meeting in January or February in which we propose to bring the county officers, particularly the new ones, into Columbia for some sort of a brief orientation on their duties and on the other matters which should be of interest to them. We usually arrange, I think, a very good program and we just wish the attendance could be more adequate to make it worthwhile.

At the meeting last year a completely new committee structure was adopted and our office has cooperated so far as possible in the work of the committees under the new setup. There were some difficulties and omissions. The results were perhaps not entirely satisfactory, but we believe the difficulties can be ironed out, with experience.

The regular meetings of the American Medical Association were attended as usual, and we continue to coordinate activities of the State Association with that of the national organization.

It has been my pleasure to be personally acquainted with and to work with Dr. George Dean Johnson almost ever since my connection with the Association and it was my special pleasure to continue to work with him, as President, this year and to try to cooperate and assist him in every way that I could and his courtesy, kindness and consideration and that of Dr. William L. Perry, Chairman of Council, and other officials of the organization have been a genuine pleasure again this year. Thank you.

The Chair: Thank you, Mr. Meadors.

(*From the Floor*) I would like to ask Mr. Meadors one question "If those twisted arms have unwound yet?"

Mr. Meadors: I don't think so, not yet. I think they will keep them for a while longer.

The Chair: Mr. Meadors, we thank you for that report and between you and me it sounds like 'you pat my back and I'll pat yours.' This report will be referred to the Reference Committee on Reports of Council and Officers.

The next report will be that of our Secretary, Dr. Ben Miller.

Dr. Ben Miller, Secretary: Dr. Johnson, Dr. Eaddy, members of the House of Delegates, this annual meeting marks my completion of five years as your Secretary. These have been most interesting years and much has been learned about the philosophy and operation of the society through contact with the delegates as well as with Council.

The close association of the Secretary with Council has demonstrated to me the arduous task carried on by your Council with wisdom and great judgment.

During this year most inquiries on placement were in the field of specialization. The Secretary could afford little more information than was to be obtained from the Directory of the Association.

The Secretary is the corresponding officer of the Association and it is his duty to inform the Governor's office of the various nominations by the House of Delegates for commission by the Governor. The American Medical Association is likewise informed officially of election of delegates and alternates, and we also take part in the various contracts made by the Association, as these various matters must be certified by the Secretary. Many of the details of the work of this office are expedited by the Executive Secretary and to him the Secretary is deeply indebted.

I would like to acknowledge to the House of Delegates my gratitude for the opportunity you have given me to serve you and I thank you.

Ben N. Miller, M. D.

TO BE CONTINUED

Journal on Microfilm

All back issues of The Journal of the South Carolina Medical Association are now available on microfilm through University Microfilms, Inc., 313 North First Street, Ann Arbor, Michigan, 48107.

MEDICAL COLLEGE OF SOUTH CAROLINA

School of Medicine Receives Grant

The School of Medicine has been awarded a $770.660 grant from the Bureau of Health Manpower, Dept. of Health. Education, and Welfare.

Dr. Franklin C. Fetter, Dean, said that the grant will be used to "strengthen the school's educational program, including a review and evaluation of curriculum, faculty retreat, recruitment and support of faculty members, and purchase of improved teaching and laboratory equipment."

The School of Medicine receives $168,660 of the project monies for the grant period July 1, 1967, through June 30, 1968, with subsequent appropriations awarded the following three years.

MCSC—Baptist College Form Cooperative Program

An experimental program of cooperation between the Medical College and the Baptist College was announced July 10 by Dr. William M. McCord, MCSC President, and Dr. John A. Hamrick, Baptist College President. The program will primarily affect students enrolled in the School of Allied Health Sciences. The Baptist College will provide a first-year course in general chemistry at the Medical College utilizing senior faculty. The Medical College will provide the necessary supplies and instructional assistance. Other courses will be provided as the programs mature.

The MCSC will provide a number of courses for Baptist College tentatively beginning with a course in general serology, directed at students who may wish to transfer to the Medical College medical technology program. Students from Baptist College and the College of Charleston will be allowed to enter the parasitology course given for medical technology students.

Dr. George Stevenson, Acting Director of the School of AHS, said the courses would be required of AHS students enrolled in the inhalation therapy, x-ray technician, and medical laboratory assistants programs. The courses will be open to other AHS students also. He said courses in English, math, physics, and other areas would be offered at a later date.

Film To Be Made On Medical College

A full color sound motion picture will go into production Sept. 18 at the Medical College.

The script commitment contract was made possible by a contribution from the South Carolina Medical Association of $2,500.

Upon completion the film will be made available to all groups in South Carolina interested in medicine, and it will be shown on the state's commercial and educational television stations.

Plastic Surgery Residency To Be Offered

A two-year residency program in plastic surgery will be available at the Medical College within the next year. The training program will be under the direction of Dr. James S. Harvin, Associate Professor of Surgery.

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50 YEARS AGO

The Journal of the South Carolina Medical Association

September 1917

A statewide anti-tuberculosis campaign was organized.

A Medical Officers pay scale was listed. A major received $3000.00. A lieutenant started at $2000.00.

Dr. J. R. Young was secretary of the Fourth District Medical Society.

Night Leg Cramps . . . Unwelcome Bedfellow
In Diabetes,[1] Arthritis,[2] and Peripheral Vascular Disorders[2]

now . . . specific therapy for night leg cramps

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QUINAMM™

Consistently effective, QUINAMM provided complete relief in 94% of 200 patients studied, many of whom were severe cases refractory to other medication.[3] Your prescription for one tablet at bedtime often controls painful night cramps with the initial dose . . . helps restore restful sleep.

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Prescribing Information: Composition: Each white, beveled, compressed tablet contains: Quinine Sulfate 260 mg. and Aminophylline 195 mg. **Contraindication:** QUINAMM is contraindicated in pregnancy because of its quinine content. **Precautions:** Aminophylline may produce intestinal cramps in some instances, and quinine may produce symptoms of cinchonism, such as tinnitus, dizziness, and gastrointestinal disturbance. Discontinue use if ringing in the ears, deafness, skin rash, or visual disturbances occur. **Dosage:** One tablet upon retiring. Where necessary, dosage may be increased to one tablet following the evening meal and one tablet upon retiring. **Supplied:** Bottles of 100 and 500 tablets. **References:** 1. Shumon, C.: Am. J. Med. Sci., 225:54, 1953. 2. Perchuk, E., et al.: Angiology, 12:102, 1961. 3. Rowls, W., et al.: Med. Times, 87:818, 1959. 6/67 Q-706A

even in ulcerative colitis...

characterized by:
—diarrhea, cramps, tenesmus
—bloody, mucoid, purulent stools

LOMOTIL® tablets/liquid

Each tablet and each 5 cc. of liquid contains:
diphenoxylate hydrochloride . . . . 2.5 mg.
(Warning: May be habit forming)
atropine sulfate . . . . 0.025 mg.

controls diarrhea

In six published studies[1-6] detailed results are given on the use of Lomotil in 111 patients with chronic ulcerative colitis. They show that Lomotil gave satisfactory to "excellent" control of diarrhea in more than two-thirds of these patients. As the disorder advances and destroys bowel musculature, the motility-lowering action of Lomotil, understandably, has less effect.

The successful use of Lomotil in a disorder as exceedingly difficult to treat as moderate ulcerative colitis emphasizes again its unsurpassed antidiarrheal effectiveness in these more common conditions:

- **Gastroenteritis**
- **Acute infections**
- **Spastic colon**
- **Drug induced diarrhea**
- **Functional hypermotility**

For correct therapeutic effect
Rx correct therapeutic dosage

Dosage: The recommended initial daily dosages, given in divided doses until diarrhea is controlled, are:

Children: Total Daily Dosage

3-6 mo. . . ½ tsp.* t.i.d. (3 mg.)
6-12 mo. . ½ tsp. q.i.d. (4 mg.)
1-2 yr. . . . ½ tsp. 5 times daily (5 mg.)
2-5 yr. . . . 1 tsp. t.i.d. (6 mg.)
5-8 yr. . . . 1 tsp. q.i.d. (8 mg.)
8-12 yr. . . 1 tsp. 5 times daily (10 mg.)
Adults: 2 tsp. 5 times daily (20 mg.)
or 2 tablets q.i.d.

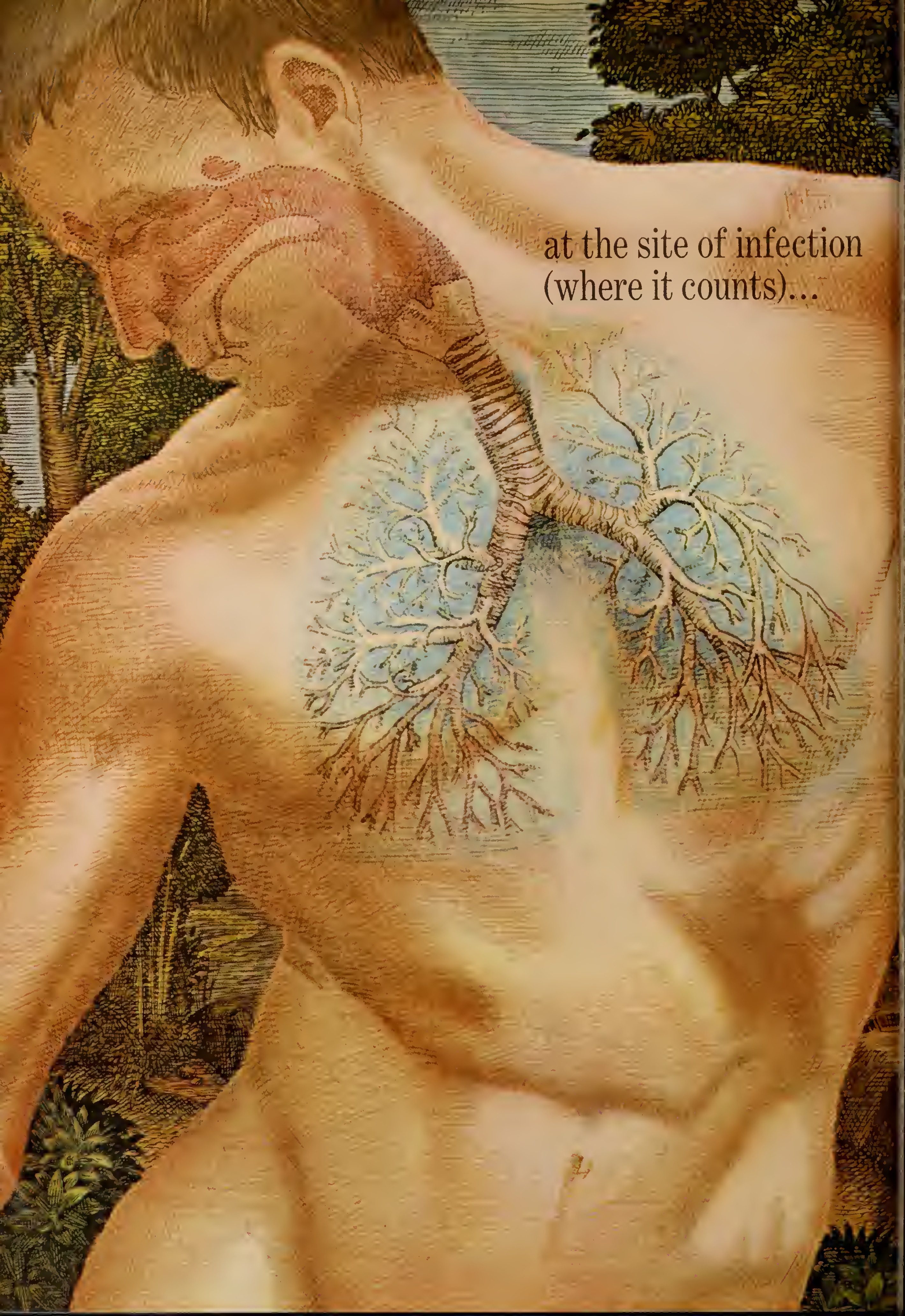
*Based on 4 cc. per teaspoonful.
Maintenance dosage may be as low as one-fourth the initial daily dosage.

Precautions: Lomotil is a federally exempt narcotic preparation of very low addictive potential. Recommended dosages should not be exceeded, and medication should be kept out of reach of children. Should accidental overdosage occur signs may include severe respiratory depression, flushing, lethargy or coma, hypotonic reflexes, nystagmus, pinpoint pupils and tachycardia. Lomotil should be used with caution in patients with impaired liver function or those taking addicting drugs or barbiturates.

Side Effects: Side effects are relatively uncommon but among those reported are gastrointestinal irritation, sedation, dizziness, cutaneous manifestations, restlessness, insomnia, numbness of the extremities, headache, blurring of vision, swelling of the gums, euphoria, depression and general malaise.

1. Barowsky, H., and Schwartz, S. A.: J.A.M.A. *180:*1058-1061 (June 23) 1962. 2. Cayer, D., and Sohmer, M. F.: N. Carolina Med. J. 22:600-604 (Dec.) 1961. 3. Hock, C. W.: J. Med. Ass. Georgia 50:485-488 (Oct.) 1961. 4. Van Derstappen, G., and Vandenbroucke, G.: Med. Klin. 56:962-964 (June 2) 1961. 5. Merlo, M., and Brown, C. H.: Amer. J. Gastroent. 34:625-630 (Dec.) 1960. 6. Weingarten, B.; Weiss, J., and Simon, M.: Amer. J. Gastroent. 35:628-633 (June) 1961.

SEARLE *Research in the Service of Medicine*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(where it counts)...

Ilosone® provides more antibacterial activity than any other oral erythromycin

Acid stable, better absorbed . . . Ilosone produces faster, higher, more prolonged blood levels, even in the presence of food[1-3]

Because it is the most active form of oral erythromycin, Ilosone can help assure consistently greater antibacterial activity at the site of infection. Ilosone produces peak antibacterial blood levels two to four times those of other erythromycin preparations.[1,2] Not only are these levels attained earlier, but they are maintained for much longer periods. Even the presence of food does not seem to affect the activity of Ilosone.[1,3]

In the treatment of patients with bacterial infections susceptible to erythromycin, Ilosone has compiled an excellent therapeutic record. Since it exerts its greatest activity against gram-positive organisms, it is particularly useful in common respiratory and soft-tissue bacterial infections. Ilosone kills—not merely inhibits—streptococci, pneumococci, and more strains of staphylococci than any other macrolide antibiotic. This bactericidal action, coupled with the high antibacterial levels attained, makes Ilosone especially valuable in patients with low host resistance, such as infants, debilitated individuals, and diabetics.

Ilosone has shown no cross-resistance with penicillin and may be effective against organisms that have become resistant to that agent. Despite its high antibacterial activity, Ilosone has demonstrated a low incidence of side reactions. Blood dyscrasias, ototoxicity, and tooth staining have not been observed. Infrequent cases of drug idiosyncrasy, manifested by a cholestatic jaundice, have occurred, but there have been no known definite residual effects.

Now available:
New! Ready-mixed Ilosone Liquid 125! (Contains erythromycin estolate equivalent to 125 mg. erythromycin base per 5-cc. teaspoonful.)

700970

Ilosone®
Erythromycin Estolate

Lilly

(See next page for prescribing information.)

Ilosone®/the most active oral form of erythromycin

Description: Ilosone is the most active form of oral erythromycin that has been developed. Because it is stable in acid, well absorbed, and excreted in lesser amounts in the bile, it provides faster, higher, and longer-lasting levels of antibacterial activity (ABA) in the serum, even when taken with food, than do comparable doses of erythromycin.

Indications: Ilosone is indicated in infections caused by microorganisms sensitive to its action (especially staphylococci, hemolytic streptococci, and pneumococci). The drug is therefore useful in a high proportion of bacterial diseases encountered in clinical practice and particularly in the treatment of bacterial infections of the upper and lower respiratory tract and soft tissues.

In the treatment of acute bacterial pharyngitis and tonsillitis, this antibiotic has promptly eradicated the bacteria (streptococci) and has produced a parallel prompt clinical improvement. There have been no group A beta-hemolytic streptococci resistant to this preparation. In beta-hemolytic streptococcus infections, treatment should be maintained for ten days to prevent the development of rheumatic fever or glomerulonephritis.

Erythromycin estolate has proved to be very effective in pneumococcus pneumonia and in acute bronchitis with pneumococci on culture. Bronchopneumonia and otitis media in children have responded well to its use.

The antibiotic has been used very successfully in staphylococcus infections. Good therapeutic results have been obtained in soft-tissue infections, abscesses, cellulitis, carbuncles, wound infections, and furunculosis.

In serious staphylococcus infections, erythromycin preparations should be used only in combination therapy with other antimicrobial agents. As is the case with any treatment regimen used in these severe conditions, surgical procedures should be performed when indicated, and large dosages of the antimicrobial agents should be employed. In this fashion, Ilosone has been effective in staphylococcus pneumonia, osteomyelitis, septicemia, empyema, and meningitis.

Multiple 500-mg. doses of the drug have also been useful in gonorrhea and syphilis. Since penicillin is the drug of choice for the treatment of syphilis and gonorrhea, erythromycin estolate should be employed for these infections only in patients with a history of penicillin allergy. Also, other infections due to susceptible bacteria in patients known to be hypersensitive to penicillin or other antibiotics may be considered for treatment with Ilosone.

Contraindications: **Ilosone is contraindicated in patients with a known history of sensitivity to this drug and in those with preexisting liver disease or dysfunction.**

Adverse Reactions: Data obtained from seven years' use of propionyl erythromycin ester and erythromycin estolate (Ilosone) indicate that hepatic dysfunction with or without clinical jaundice may occur during or following courses of therapy with the drug.

Changes in liver function tests in such cases have been indicative of intrahepatic cholestasis. The symptoms appear to be the result of a form of sensitization. The initial symptoms have developed in some cases after a few days of treatment but generally have followed one or two weeks of continuous therapy or several courses of the drug. Symptoms reappear promptly, usually within forty-eight hours, if the drug is readministered to sensitive patients. Eosinophilia was noted in peripheral blood counts. The findings readily subsided without apparent residual effects when treatment was discontinued. Recovery was delayed in one reported instance. The physician indicated in this case that either drug-induced jaundice or viral hepatitis may have been responsible for the findings.

In one clinical study involving ninety-three patients treated with the antibiotic, three cases of jaundice were observed and an additional eleven cases developed some changes in liver function tests. Three of the patients had abnormal liver function tests a second time on readministration of the drug.

Even though it is assumed that not all cases of jaundice have been reported, it seems clear that the number is small compared with the amount of drug that has been used. Reported cases have included persons in whom there had been administered other drugs known to be associated at times with hepatic side-effects and cases in which the presence of viral hepatitis or other disease may have been responsible for the findings. In some of the cases, associated gastro-intestinal symptoms simulated the colic of biliary tract disease. In other instances, clinical symptoms and results of liver function tests resembled findings in extrahepatic obstructive jaundice. It appears that the occurrence of jaundice after administration of Ilosone is infrequent, but further investigations are being made to estimate its incidence more accurately.

In those cases mentioned above in which jaundice appeared t be definitely related to use of the drug, laboratory findings wer characterized by increased direct-reacting bilirubin, elevate alkaline phosphatase levels, negative or weakly positive cephali flocculation and thymol turbidity tests, elevated serum glutami oxalacetic transaminase levels, peripheral eosinophilia, and no mal cholecystograms.

Individual idiosyncrasy seems evident since jaundice has no been reported in other patients taking prolonged courses of th medication. Patients with chronic infection have been given 1 t to 2 Gm. of the drug daily for periods of two to six months, an patients with rheumatic fever have taken prophylactic doses o 0.5 Gm. daily for two years without difficulty. In one group o 144 patients who received the drug daily for two years, no jau dice was noted. It was of interest that members of six of thes patients' families, who were not taking the drug, had episode of jaundice during the study period.

Transaminase and serum alkaline phosphatase levels we determined in a group of fifty-four adults and children who too 250 mg. of Ilosone daily for an average of sixteen months a rheumatic fever prophylaxis. The results were compared wit those of a similar group of forty-four patients who received pe icillin. There were no cases of jaundice in either group. Elevatio of SGPT and serum alkaline phosphatase levels during the cour of treatment was observed in one patient treated with Iloso and in two patients treated with penicillin. Seven other patien in the group receiving Ilosone and four others in the penicilli group showed elevations in one of the tests at some time durin administration of the drugs.

Very satisfactory therapeutic results, without toxicity, we reported in 102 pediatric patients who received short-term (te day) courses of Ilosone in the treatment of streptococcus infe tions. Results of liver function tests in these patients we comparable to those in a similar control group who had receive penicillin.

Gastro-intestinal disturbances not associated with hepatic e fects are observed in a small proportion of individuals as a resu of a local stimulating effect of the medication on the alimenta tract; however, the normal intestinal gram-negative bacteri flora is not appreciably altered by erythromycin drugs.

Although allergic manifestations are uncommon with the u of erythromycin, there have been occasional reports of urticari skin eruptions, and, on rare occasions, anaphylaxis.

Administration and Dosage: Ilosone is administered orally.

Ilosone Pulvules®, Ilosone Liquid 125, Ilosone, 125, for Or Suspension, Ilosone Drops, Ilosone Chewable Tablets.

For infants and for children under twenty-five pounds of bo weight, the usual dosage is 5 mg. per pound every six hours; f children twenty-five to fifty pounds, 125 mg. every six hou (Tablets Ilosone Chewable should be chewed or crushed a swallowed with water.)

For adults and for children over fifty pounds, the usual dosa of Ilosone is 250 mg. every six hours.

For severe infections, these dosages may be doubled.

When larger doses are indicated, parenteral erythromyc therapy should be considered.

In the treatment of syphilis, the recommended total dosage 20 to 30 Gm. given in divided doses for a period of ten to fifte days. Close follow-up of the patient is necessary since erythr mycin drugs have not had adequate evaluation in all stages syphilis. Examinations of spinal fluid are recommended as pa of the follow-up therapy.

For gonorrhea, 500 mg. four times a day for four days a recommended. In the treatment of gonorrhea, patients with suspected lesion of syphilis should have a dark-field examinati before receiving antibiotics, and monthly serologic tests shou be made for a period of three months.

How Supplied: Pulvules Ilosone, Capsules, N.F., 125 and 250 m (equivalent to base), in bottles of 24 and 100.

Ilosone Liquid 125, Oral Suspension, U.S.P., 125 mg. (equivale to base) per 5-cc. teaspoonful, in 60-cc. and pint-size packag

Ilosone, 125, for Oral Suspension, N.F., 125 mg. (equivale to base) per 5-cc. teaspoonful, in 60 and 150-cc.-size packag

Ilosone Drops, 5 mg. (equivalent to base) per drop, in 10-cc.-si packages, with dropper calibrated at 25 and 50 mg.

Tablets Ilosone Chewable, N.F., 125 mg. (equivalent to bas in bottles of 50. [0327

References: 1. Griffith, R. S., and Black, H. R.: Am. J. M. Sc., *247:*69, 19
2. Griffith, R. S., and Black, H. R.: Antibiotics & Chemother., *12:*398, 19
3. Hirsch. H. A., Pryles, C. V., and Finland, M.: Am. J. M. Sc., *239:*198, 1960.

Additional information available to physicians upon request.
Eli Lilly and Company, Indianapolis, Indiana 46206.

Lill

70

Doctors In The News

Dr. S. Nelson Weston has joined his father, **Dr. William Weston, Jr.**, in the practice of pediatrics in Columbia at 1515 Bull Street. Dr. Weston was graduated from Episcopal High School in Alexandria, Va., the University of South Carolina and the Medical College of South Carolina. He interned at Vanderbilt University Hospital, remained there as a resident in pediatrics and continued his residency at Duke University Hospital. For the past two years, Dr. Weston has been the chief pediatrician at the the 363rd Tactical Hospital, Shaw Air Force Base. He has been certified by the American Board of Pediatrics. **Dr. J. N. Walsh** of Moncks Corner has retired after completing 41 years of practicing medicine in Berkeley County. **Dr. Lucius Pinckney Varn** has resigned as director of the Charleston County Health Department. He is re-entering private practice in Orangeburg. **Dr. Earl Keeney Wallace, Jr.** has announced his return to the practice of orthopaedic surgery at 109-A Ashley Avenue, Charleston. **Dr. W. D. Gilmore, Jr.**, and **Dr. Jim F. Hicks** announce the association of **Dr. J. Rutledge Lawson** in the practice of pediatrics at Wade Hampton Mall, Greenville.

Dr. Norman O. Eaddy and **Dr. Kenneth Aycock** were among featured speakers during the South Carolina Hospital Association's summer meeting at Myrtle Beach. **Dr. Harry E. Trantham** has opened an office for the practice of ophthalmology at 407 Vardry St., Greenville. **Dr. Paul E. Staley**, Charleston internist, has been elected to membership in the American Society of Internal Medicine. **Dr. Kate Elizabeth Smith** of Turbeville has been elected to active membership in the American Academy of General Practice. **Dr. Steven M. White** of Clemson has completed his residency in ophthalmology at N. C. Memorial Hospital, Chapel Hill, and is entering private practice in Greenville, North Carolina. **Dr. Robert R. Taylor** has opened a new office for the practice of neurology in Columbia at 1609 Brabham Avenue. A portrait of **Dr. Walter R. Mead** of Florence was hung recently in the Palmetto Center. Dr. Mead was chairman of the Center's board of directors from the institution's establishment in 1957 to 1966 when he was forced to retire because of illness. **Dr. Clarence E. Coker, Jr.** of Manning has opened his office for the practice of general family medicine on the corner of Sunset Drive and Boundary Street in Manning. **George E. Jeffries, III** of Norristown, Pa., a senior at Jefferson Medical College, is the recipient of a preceptorship donated by the Family Health Foundation of America and awarded by the American Academy of General Practice Commission on Education. He is working this summer under the close supervision of **Dr. George G. Durst** of Sullivans Island. **Dr. James Macdonald** of Clinton has been elected to membership in the American Academy of General Practice. **Dr. Jesse B. Floyd** of Winnsboro has been re-elected to active membership. **Dr. Karl M. Lippert**, director, Columbia VA Hospital, has announced the appointment of **Dr. Attilio A. Ceraldi**, surgeon, on the staff of the hospital. **Dr. John G. Gatgounis** has announced the opening of his office at 71 Savannah Highway, Charleston, for the practice of anesthesiology. **Dr. Emmett William Flynn, Jr.** is now associated with **Dr. William L. Cheezem, Jr.** in the practice of surgery and gynecology in Marion. **Dr. James L. Graham, Jr.** has returned to Johnston to practice general medicine. He will practice with **Dr. R. A. Steadman**. **Dr. John P. Jackson, Jr.** has opened offices for the practice of internal medicine at 7 Vardry Medical Court, Greenville. **Dr. James B. Berry, Jr.** of Marion has been named first chairman of the new South Carolina Mental Retardation Committee.

Blue Cross - Blue Shield of South Carolina
Physician Relations Department

During the month of June, 8,900 Blue Shield and FEP Claims were received. Of these, 812 were returned to the physicians' offices due to insufficient or incorrect information, (562 Blue Shield Claims and 250 FEP Claims) or 9.01% of the claims volume. This means that

9.01% of the claims submitted had to be handled twice in the doctor's office, adding to the already heavy load of paper work, and twice in the Blue Shield Claims Department, delaying payment and increasing operating expense, which is eventually reflected in the amount which Blue Shield can pay in benefits for services rendered by physicians.

In order to serve you better, the Physician Relations Department has been working with the Claims Department to analyze the reasons which necessitate the returning of claims. Our analysis of returned claims reveals that approximately 80% are returned for incorrect certificate numbers. This is vitally important as our subscriber records are filed according to certificate number. By urging that your office staff double-check the number on each claim filed, we hope to eliminate waste of valuable time in your office in having to handle these claims twice. Also, we urge that your patients' records be checked to be sure that the certificate number recorded is correct, in order to avoid the same problem on subsequent claims submitted.

Additionally, a large number of claims are returned to the physician's office because they are out-of-state claims. If we forward them to the other Blue Shield plans, and subsequently receive from the physician's office an inquiry as to why the claim has not been paid, we have no record of such claims. Therefore, we return the claims to the physician's office requesting that they be sent to the appropriate Plan, in order that you may know to look to that Plan for payment. Recently, we furnished to all physicians the names and addresses of all active Blue Shield Plans, as we realize the problem this sometimes occurs in the doctor's office.

We hope, through these efforts, to reduce the number of claims returned to your office, eliminating the necessity of handling the claims twice, as well as reducing operating expense, which in turn is reflected in Blue Shield benefit payments.

Medical College of Georgia

The annual General Practice Review at the Medical College of Georgia is being presented in Augusta for practicing physicians on November 6 through 10, 1967. In this five-day program emphasis will be placed on the recognition and proper management of conditions frequently encountered by physicians in family practice. Separate sections of the course will cover the following topics:

Pediatrics, Internal Medicine, Gastrointestinal Disorders, Obstetrics and Gynecology, Dermatology, and Ophthalmology.

The instruction will utilize multiple formats—lectures, panel discussions, special audiovisual techniques, and question and answer periods. The afternoon of the third day is unscheduled time so that the enrollees may attend regular clinical teaching conferences or rounds in our hospital or, if they prefer, take advantage of local tourist and recreational opportunities. Formal instruction is scheduled for one evening in addition to the morning and afternoon sessions. On the evening of the first day a course banquet will be held.

The registration fee is $80.00 for the full course or $20.00 per day.

Division of Continuing Education
Medical College of Georgia
Augusta, Georgia 30902

MEETINGS

The 61st Annual Meeting of the Southern Medical Association will be held in Miami Beach, Florida, November 13-16 at the Hotel Fontainebleau.

The Tennessee Valley Medical Assembly will be held October 2-3 in Memorial Auditorium, Chattanooga, Tenn. The 15th annual assembly is sponsored by the Chattanooga and Hamilton County Medical Society, Inc.

The American College of Physicians will hold a regional scientific meeting for specialists in internal medicine in six southeastern states Sept. 29-30. The meeting will be held at The Cloister, Sea Island, Ga. Internists from Alabama, Florida, Georgia, Louisiana, Mississippi and South Carolina are expected to attend. For more information, write: Tully T. Blalock, M. D., 2948 Habersham Way, N. E., Atlanta, Ga.

The Medical Writers' Institute, a teaching seminar now in its tenth year, will hold its next session at the Princeton Club in New York City on October 23. For further details, write: Dr. J. F. Montague, 104 East 40th Street, New York, N. Y. 10016.

SCALPEL

TENTATIVE WORKSHOP PROGRAM
CAPITOL CABANA—COLUMBIA
SATURDAY, SEPTEMBER 30, 1967

10:30 a.m. Opening By Presiding Officer— Dr. Charles Browne, Chairman
Welcoming Remarks— Dr. Norman Eaddy, President, South Carolina Medical Association.

10:45 a.m. History and Development of the PAC Movement — Mr. Edwin F. Smith, Field Representative, AMPAC, Atlanta, Georgia.

11:15 a.m. Maximizing Membership — Dr. Charles Browne.

11:35 a.m. Physicians' Wives In Politics—Mrs. Frank Gastineau, Member AMPAC Board of Directors, Indianapolis, Indiana.

11:55 a.m. Voter Laws of South Carolina—Mr. James Ellisar, Director, State Re-Registration, Columbia, South Carolina.

12:30 p.m. Luncheon
The Physician As A Citizen—Congressman Albert Watson, (R-S. C., 2nd).

2:00 p.m. A Congressman's Two-Year Campaign For Re-Election—AMPAC Film.

2:30 p.m. It's Easy To Lose—It's Hard To Win— Dr. Blair Henningsgaard, Chairman, AMPAC Board of Directors, Astoria, Oregon.

2:50 p.m. Announcements—Dr. Charles Browne.

MEDICAL ETV

Thursday and Friday, October 5, 6, 1967
8:00-9:00 P. M.
Oral Manifestations of Systemic Disease

Participants: Robert Wilson, M. D., Clin. Prof. of Medicine, and William B. Irby, D. D. S., Chm. Dept. of Oral Surgery, Medical College of South Carolina.

Thursday, October 19, 1967—8:00-9:00 P. M.
From the University of Utah College of Medicine:
Common Chromosomal Disorders

Speakers: Wayne S. Zundel, M. D., Frank H. Tylor, M. D., Marvin L. Rallison, M. D., and William MacDiarmid, M. D., all of Univ. of Utah College of Medicine.

Thursday and Friday, November 2, 3, 1967
8:00-9:00 P. M.
The Master Test

Dr. Arthur M. Master, Clinical Prof. of Medicine, Columbia Univ. College of Physicians & Surgeons, New York City.

Thursday, November 16, 1967—8:00-9:00 P. M.
From the New York Academy of Medicine:
Malabsorption Syndrome

Marvin H. Sleisenger, M. D., Chief, Dept. of Gastroenterology, Graham H. Jeffries, M. D. and Elliot Weser, M. D. of the Dept. of Medicine, Cornell University Medical College.

RESOLUTION UPON THE DEATH OF C. J. SCURRY, M. D.

With the passing of Carroll Jenkins Scurry, M. D., the Staff of the Self Memorial Hospital realizes a keen loss. He was one of the devoted leaders in the field of Medicine and Surgery in this section of the State and his influence was felt far beyond the confines of South Carolina. At no time did he fail to exhibit those traits of character and leadership which befit the truly great personalities of science.

At all times he was eagerly willing to lend his talent and incisive judgment to any and all problems which at the time might be besetting the area of his accomplishment; his titanic energy and joyous spirit were infused to those about him. Forgetful of self and constantly feeling his responsibility for others he amply exemplified the demeanor of the true servant giving himself that his fellowman might be helped.

The number who felt his professional touch are legion; those who were helped in other areas by him are unnumbered. The concept of his manliness and the impact of his spirit will continue to live with ever-recurring freshness.

The entire membership of the Staff of this hospital desires to transmit to his family its sympathy and to rejoice with them in his continuing greatness.

Internist wanted—associate for a three man partnership. Board qualified or certified. Location in a very actively growing part of the Metropolitan Atlanta, Georgia area. Full partnership possible in twenty-four months.

Write *Journal* S. C. M. Assoc., Florence, S. C., 201 Coit St.

Deaths

Dr. Richard Bedon Josey

Dr. Richard B. Josey, 59, of Columbia died June 29.

He was graduated from the University of South Carolina and the School of Medicine of the University of Rochester in Rochester, N. Y. He served his internship at New York City Hospital and spent three years at Johns Hopkins Hospital.

He practiced pediatrics in Columbia from 1938 to 1965, when he joined the medical staff of the University of South Carolina. He was a Major in the U. S. Army Medical Corps during World War II.

Dr. Josey was a member of the Richland County Medical Society and the S. C. Pediatric Society.

Dr. A. L. Smethers

Dr. A. L. Smethers, 92, died June 26 in Anderson.

A native of Pennsylvania, Dr. Smethers was graduated in 1896 from the State Normal School at Bloomington, Ill. After a brief career in YMCA work he moved to Ann Arbor, Mich., to enter medical school, and graduated as a physician and surgeon in 1906, and moved to Anderson the following year.

Dr. Smethers was a life member of the Anderson College Board for many years, a charter member of the Anderson Kiwanis Club, chairman of the Red Cross chapter, chairman of the First Baptist Church Board of Deacons and a member of numerous professional groups.

Dr. Carroll Jenkins Scurry

Dr. Carroll Jenkins Scurry, 73, Greenwood's oldest active physician and surgeon, died July 1 at his home.

A native of Chappells, Dr. Scurry practiced medicine in Greenwood since 1919. He was graduated from Wofford College and Emory University Medical School. He served his internship and residence at St. John's Hospital, Pittsburgh, Pa., and was an Army medical officer in World War I. He was chief of staff at Greenwood Hospital and was the first chief of staff at Self Memorial Hospital. He was also on the staff of Brewer, Abbeville County and Laurens hospitals.

He received an honorary degree of doctor of medical science from Lander College in 1962. He was a member of the Southeastern Surgical Congress, American College of Surgeons and International College of Surgeons.

Dr. O. R. Russell

Dr. O. Raymond Russell, 58, of Conway, died August 10.

Dr. Russell was born in Cicero, Ind., and was graduated from the University of Indiana Medical College in 1934 magna cum laude. Dr. Russell served his internship at St. Vincent's Hospital, Indiana. He started general practice in 1936 at Francton, Ind. He entered the service as a flight surgeon in the Air Force in 1942 and was discharged from the service as major in 1946. He served as a resident doctor in radiology at the University of Indiana in 1946. Dr. Russell started the radiology department in Conway and the Conway Hospital in 1950, where he served as chief radiologist until his health failed in 1962. He was certified on the radiology board in 1955. He was a member of the Horry County Medical Society, the South Carolina Medical Association, the American Medical Association, the Southern Medical Association, and the American College of Radiology. He was a Mason, a Scottish Rite Mason, and a Shriner.

New Pharmaceutical Specialties

by Paul De Haen

For detailed information regarding indications, dosage, contraindications and adverse reactions, refer to the manufacturer's package insert or brochure.

Single Chemicals—Drugs not previously known, including new salts.

Duplicate Single Products—Drugs marketed by more than one manufacturer.

Combination Products—Consisting of two or more active ingredients.

New Dosage Forms—Of a previously introduced product.

NEW SINGLE CHEMICALS

CLOMID

Fertility agent, non-hormonal. Rx

Manufacturer. The Wm. S. Merrell Company

Nonproprietary Name: Clomiphene citrate

Indications: Treatment of ovulatory failure in patients desiring pregnancy, when ovulatory dysfunction is demonstrated. Clinical evaluation of liver function should always precede Clomid therapy. Ineffectual in patients in whom primary pituitary or ovarian failure precludes the possibility of stimulating normal function.

Contraindications: Pregnancy, liver disease or history of liver dysfunction, abnormal bleeding of undetermined origin.

Dosage: 50 mg daily for 5 days, beginning on or about the fifth cycle day. If ovulation does not occur, dosage can be increased to 100 mg daily for 5 days. Not more than 3 courses of therapy should be given.

Supplied: Tablets—50 mg; cartons of 30.

VONTROL

Antinauseant. Rx

Manufacturer: Smith Kline & French

Nonproprietary Name: Diphenidol

Indications: Vertigo, nausea and vomiting.

Contraindications: Anuria, known hypersensitivity to the drug.

Dosage:

Adults—50 mg q.4h. as needed.

Children (for nausea and vomiting only)—0.4 mg/lb. rectally, not to exceed 2.5 mg/lb. in 24 hours.

Supplied: Suppositories—25 and 50 mg; boxes of 6.

VONTROL (HCl)

Antinauseant. Rx

Manufacturer: Smith Kline & French

Nonproprietary Name: Diphenidol HCl

Indications: Vertigo, nausea and vomiting.

Contraindications: Anuria, known hypersensitivity to the drug.

Dosage:

Adults—25 mg q.4h. as needed.

Children (for nausea and vomiting only)—0.4 mg/lb. orally, not to exceed 2.5 mg/lb. in 24 hours.

Supplied: Tablets—25 mg; bottles of 100.

VONTROL (Pamoate)

Antinauseant. Rx

Manufacturer: Smith Kline & French

Nonproprietary Name: Diphenidol pamoate

Indications: Nausea and vomiting.

Contraindications: Anuria, known hypersensitivity to the drug.

Dosage: Children—0.4 mg/lb. orally, not to exceed 2.5 mg/lb. in 24 hours.

Supplied: Suspension—20 mg/5 ml; bottles of 4 oz.

DUPLICATE SINGLE PRODUCTS

QUESTRAN

Sequestering agent. Rx

Manufacturer: Mead Johnson

Nonproprietary Name: Cholestyramine

Indications: Relief of pruritus associated with partial biliary obstruction.

Contraindications: Complete biliary obstruction.

Dosage: Adults and children over 6 years—4 Gm t.i.d. with liquids before meals, to be adjusted as necessary, not to exceed 24 Gm daily.

Supplied: Packets—4 Gm; cartons of 50.

COMBINATION PRODUCTS

PARGEL

Antidiarrheal. o-t-c

Manufacturer: Parke, Davis & Co.

Composition: Each ounce contains:

Kaolin	6 Gm
Pectin	130 mg

Indications: Diarrhea

Contraindications: None mentioned.

Dosage: As indicated.

Supplied:

Plastic bottles—6 and 10 oz.

Glass bottle—16 oz.

NEW DOSAGE FORMS

ILOSONE LIQUID 125

Antibiotic—B & M spectrum. Rx

Manufacturer: Eli Lilly & Co.

Nonproprietary Name: Erythromycin estolate

Indications: Infections susceptible to erythromycin.

Contraindications: Liver disease or dysfunction, known hypersensitivity to the drug.

Dosage: Same as for other oral Ilosone preparations.

Supplied: Oral Suspension—125 mg/5ml; contaniers 60 ml, 1 pint.

Book Reviews

PATHOLOGY, 3rd Edition, by Stanley L. Robbins, M. D. W. B. Saunders Co., Philadelphia, 1967, 1460 pages, $20.50.

The author of present-day textbooks concerning medical science has a choice. He may prepare a chest crushing, (if you read in bed) encyclopedic tome or a rather synoptic type of book in which only fundamentals or basic principles are covered. He may choose to make his text replete with illustrations and transform it into a virtual atlas, frequently at the expense of literary style, or cleave to the written, factual word with a paucity of illustrations, all too often of mediocre, "thrown-in," quality.

One text has too much, the other too little and blessed is the author (from the clinician's and student's standpoint) who achieves a happy compromise.

Dr. Robbin's new edition of Pathology has achieved the difficult attribute of being "just right." As he states in his preface, "Encyclopedic coverage has been avoided, lest the central issues get lost in the peripheral. The decision was made to present subjects in some detail rather than to attempt a more superficial exposition of a wider coverage."

The text has grown by some 270 pages since the last edition but the book is not unwieldy. The two column print is clearly readable and the format and titling lucid and attractive.

The number of chapters remains the same, thirty-two, but two new chapters have been added, "Genetics and Disease" and "Diseases of Aging." Other material has been redistributed or rearranged. For example such important subjects as thrombosis, embolism and infarction are now included in the chapter concerned with Derangements in Fluids and Blood Flow, rather than being allotted a separate chapter. This has been accomplished without minimizing their importance and is a logical arrangement. The discussion of diseases of immune origin is particularly well done and substantially revised and expanded from the corresponding material in the previous edition. Other sections incorporate new material and have been rewritten.

Seventy-six new illustrations, including some elegant electron microscopic ones, have been added.

Above all clinical correlation is stressed "in the firm conviction that learning is maximal when the reasons for learning are evident."

This is an up-to-date, well written text, neatly balanced as to content and illustrative material, competently covering that which in the broadest sense is the study of medicine, and therefore earnestly recommended to clinician, pathologist and student alike.

H. Rawling Pratt-Thomas, M. D.

THE NEW GENETICS, by Leonard Engel, Doubleday and Company, Garden City, New York 1967. Pp. 220. $5.75.

Most of you who took college and medical school basic science courses prior to 1950 have probably wondered: "What is this new genetics? What is all of this talk about DNA and RNA? What is so important about the Watson-Crick double helix model? Why all of this interest in microbial genetics? Why have eight scientists working in these fields received Nobel prizes in medicine and physiology during the last ten years?"

If you have wondered about any of these things, this book was written for you. Engel was a professional writer—not a scientist—but, as Nobel prize winner Tatum states in the preface, he was "a master craftsman in science interpretation." Engel describes the important experiments and the men who designed and performed them, and tells the significance of each new added piece of knowledge. He was an excellent writer and any person, with a college degree or its equivalent and with an interest in genetics, should be able to understand and enjoy this book.

Unfortunately, Engel died of lung cancer after only 13 chapters (180 pages) were completed. His edited notes for the remaining three chapters have been included as Essays. The illustrations, made from his notes after his death, are not good but this does not detract too much from the book, which I highly recommend.

Elsie Taber, Ph.D.

MONGOLISM. Ciba Foundation Study Group No. 25. Edited by G. E. W. Wolstenholme and Ruth Porter. Little, Brown and Company, Boston, 1967. 99 pages, 23 illustrations.

A small book containing a toplevel discussion of mongolism. This latest word unfortunately sounds very much like the earlier accepted, but unsatisfactory concepts. The reviewer has

"... heard great augument
About it and about: but evermore
Came out by the same door where in I went."

JIW

FACTS COUNT

IN PLANT SITE SELECTION

facts count, too, in selecting health care coverage

Companies selecting South Carolina sites for new plants invested over half a billion dollars on new manufacturing facilities in 1965, more than double the previous year's record. This brings the new industrial investment figure for the past six years to a high of nearly two billion dollars. During this period, well over 100,000 new job opportunities were created in South Carolina.

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GREAT IDEAS IN THE HISTORY OF SURGERY. Leo M. Zimmerman and Ilza Veith. Dover Publications, Inc., New York. 2nd Edition. 1967. Pp. 118 pictures. $3.00.

Published some four years ago in a more expensive edition, this excellent account of the great men in the history of surgery, their lives, their ideas, and parts of their writings is now available in an inexpensive format, well worth more than its price. The accounts are readable, the selections apt, and the illustrations numerous and pertinent.

This reviewer cannot refrain from picking out a small error. Marion Sims attended the Medical College of the State of South Carolina, not the North Carolina Medical School (which did not exist then), nor was all of South Carolina at the time afflicted with the "harshness and intellectual poverty of the frontier" so glibly attributed to it by the authors.

JIW

CECIL-LOEB "TEXTBOOK OF MEDICINE," edited by Paul B. Beeson and Walsh McDermott. W. B. Saunders Co., Philadelphia and London, 1967. $20.50.

The twelfth edition of this classic multi-authored textbook of medicine is published on the fortieth anniversary of the first edition. The editor of the first edition died in 1965. The senior editor of the present edition, Paul Beeson, is now Nuffield Professor of Medicine at Oxford. As usual in the frequent revisions of the book, there have been many changes of authors for the various disease sections, and descriptions and treatment of diseases have been well brought up to date.

An unusual achievement, in view of the recent explosion of medical knowledge, is that although 226 of the articles have been rewritten and 57 are on subjects not included in the last edition, the size of the book has been reduced by approximately 100 pages.

This remains an authoritative textbook which is highly recommended to students of medicine at all levels of undergraduate and postgraduate development.

John A. Boone, M. D.

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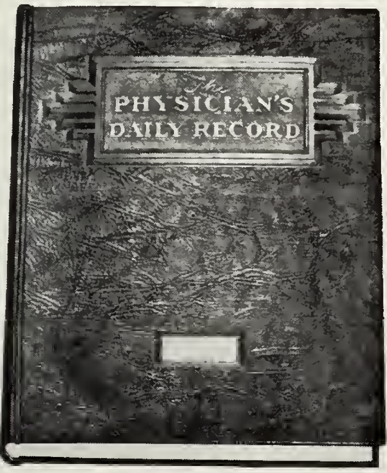

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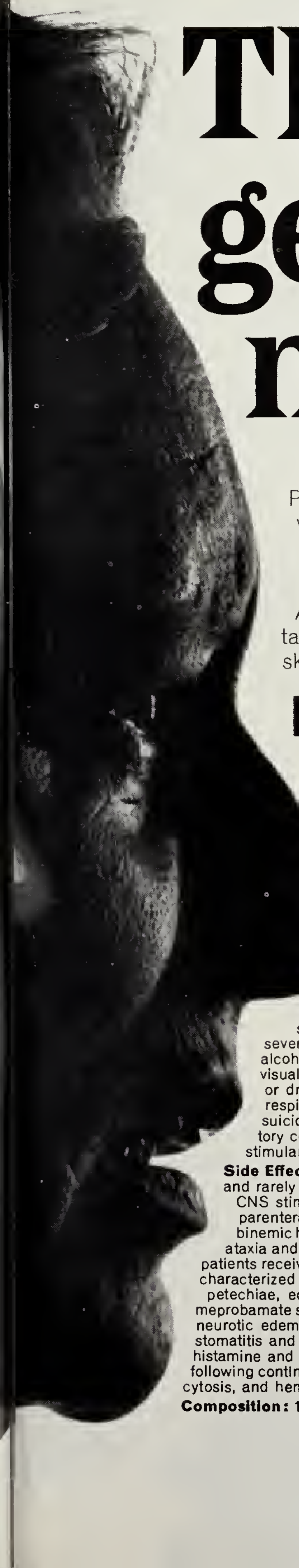

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Contraindications: History of sensitivity or severe intolerance to aspirin or meprobamate.

Warnings: USE IN PREGNANCY: Safety for use during pregnancy or lactation has not been established; therefore it should be used in pregnant patients or women of child-bearing age only when the physician judges its use essential to the patient's welfare.

Precautions: Keep out of reach of children. Not recommended for patients 12 years old or less. Carefully supervise dose and amounts prescribed, especially for patients prone to overdose themselves. Excessive prolonged use of meprobamate may result in dependence or habituation in susceptible persons—as alcoholics, ex-addicts, severe psychoneurotics. Withdraw gradually after prolonged high dosage to avoid possibly severe withdrawal reactions including epileptiform seizures. Warn patients of possible reduced alcohol tolerance. If drowsiness, ataxia or visual disturbances (impairment of accommodation and visual acuity) occur, reduce dose. If symptoms persist, caution patients against operating machinery or driving. After meprobamate overdose, prompt sleep, reduction of blood pressure, pulse and respiratory rates to basal levels, and hyperventilation are reported. Give cautiously to patients with suicidal tendencies. Treat attempted suicide (has resulted in coma, shock, vasomotor and respiratory collapse and anuria) with immediate gastric lavage and appropriate supportive therapy (CNS stimulants and pressor amines as indicated).

Side Effects: Ethoheptazine and aspirin may occasionally cause nausea, vomiting, epigastric distress, and rarely dizziness. Overdosage may result in CNS depression (drowsiness and lightheadedness) or CNS stimulation and salicylate intoxication (requires induced vomiting or gastric lavage, specific parenteral electrolyte therapy for ketoacidosis and dehydration, and observation for hypoprothrombinemic hemorrhage [usually requires whole blood transfusions]). Meprobamate may cause drowsiness, ataxia and rarely allergic or idiosyncratic reactions. These reactions, sometimes severe, can develop in patients receiving only 1 to 4 doses who have had no previous contact with meprobamate. Mild reactions are characterized by urticarial or erythematous maculopapular rash. Acute nonthrombocytopenic purpura with petechiae, ecchymoses, peripheral edema and fever have been reported. If allergic reaction occurs, meprobamate should be stopped and not reinstituted. Severe reactions, observed very rarely, include angioneurotic edema, bronchial spasms, fever, fainting spells, hypotensive crises (1 fatal case), anaphylaxis, stomatitis and proctitis (1 case) and hyperthermia. Treat symptomatically such as with epinephrine, antihistamine and possibly hydrocortisone. A few cases of leucopenia, usually transient, have been reported following continuous use. Rarely, cases of aplastic anemia (1 fatal case), thrombocytopenic purpura, agranulocytosis, and hemolytic anemia have been reported; almost always, in the presence of known toxic agents.

Composition: 150 mg. meprobamate, 75 mg. ethoheptazine citrate and 250 mg. aspirin per tablet.

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Parepectolin for quick relief of acute diarrhea
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Each fluid ounce of creamy white suspension contains:

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Before prescribing, please consult complete product information, a summary of which follows:

Contraindications: Infants, patients with history of convulsive disorders, glaucoma or known hypersensitivity to drug.

Warning: Not of value in the treatment of psychotic patients, and should not be employed in lieu of appropriate treatment.

Precautions: Limit dosage to smallest effective amount in elderly or debilitated patients (not more than 1 mg, one or two times daily initially) to preclude ataxia or oversedation, increasing gradually as needed or tolerated. As is true of all CNS-acting drugs, until correct maintenance dosage is established, advise patients against possibly hazardous procedures requiring complete mental alertness or physical coordination. Driving during therapy not recommended. In general, concurrent use with other psychotropic agents is not recommended. If such combination therapy is used, carefully consider individual pharmacologic effects—particularly with known compounds which may potentiate action of Valium (diazepam), such as phenothiazines, barbiturates, MAO inhibitors and other antidepressants. Advise patients against simultaneous ingestion of alcohol or other CNS depressants. Safe use in pregnancy not established. Employ usual precautions in treatment of anxiety states with evidence of impending depression; suicidal tendencies may be present and protective measures necessary. Observe usual precautions in impaired renal or hepatic function. Periodic blood counts and liver function tests advisable in long-term use. Cease therapy gradually.

Side Effects: Side effects (usually dose-related) are fatigue, drowsiness and ataxia. Also reported: mild nausea, dizziness, blurred vision, diplopia, headache, incontinence, slurred speech, tremor and skin rash; paradoxical reactions (excitement, depression, stimulation, sleep disturbances, acute hyperexcited states, hallucinations); changes in EEG patterns during and after drug treatment. Abrupt cessation after prolonged overdosage may produce withdrawal symptoms (convulsions, tremor, abdominal and muscle cramps, vomiting, sweating) similar to those seen with barbiturates, meprobamate and chlordiazepoxide HCl.

Dosage—*Adults:* Mild to moderate psychoneurotic reactions, 2 to 5 mg b.i.d. or t.i.d.; severe psychoneurotic reactions, 5 to 10 mg t.i.d. or q.i.d.; alcoholism, 10 mg t.i.d. or q.i.d. in first 24 hours, then 5 mg t.i.d. or q.i.d. as needed; muscle spasm with cerebral palsy or athetosis, 2 to 10 mg t.i.d. or q.i.d. *Geriatric patients:* 1 or 2 mg/day initially, increase gradually as needed and tolerated. (See Precautions)

Supplied: Valium® (diazepam) Tablets, 2 mg, 5 mg and 10 mg; bottles of 50 and 500.

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Tuinal helps wakeful patients fall asleep fast, stay asleep all night.

Indications: Tuinal is indicated for prompt and moderately long-acting hypnosis. It is not suitable for continuous daytime sedation.

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Warning: May be habit-forming.

Precautions: Tuinal should be used cautiously in patients with decreased liver function, since prolongation of effect may occur.

Adverse Reactions: Idiosyncrasy, such as excitement, hangover, or pain, may appear. Hypersensitivity reactions occur in some patients, especially in those with asthma, urticaria, or angioneurotic edema.

Overdosage: C.N.S. depression. Symptoms—Depression of respiration and of superficial and deep reflexes, slight constriction of the pupils (in severe poisoning, dilation), decreased urine formation, lowered body temperature, coma. Treatment—Symptomatic and supportive (gastric lavage; intravenous fluids; maintenance of blood pressure, body temperature, and adequate respiration). Dialysis may speed removal of barbiturates from body fluids.

Dosage: 50-200 mg. (¾-3 grains) at bedtime.

[031767]

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Each capsule contains:

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Calcium Pantothenate	20 mg

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announces

a breakthrough in the control of pain

Talwin®

brand of

pentazocine

(as lactate)

a potent, injectable non-narcotic

For every physician who has ever prescribed morphine

Talwin is the new potent non-narcotic injectable analgesic which is indicated for relief of all types and degrees of pain in acute and chronic disorders. Talwin 30 mg. is usually as effective an analgesic as morphine 10 mg. or meperidine 75 to 100 mg., but needs no narcotics controls. The duration of action of Talwin may sometimes be less than that of morphine.

Talwin is relatively free from adverse effects of morphine, such as constipation, urinary retention, or severe respiratory depression.

It has been used, in varying dosages, in over 12,000 patients for relief of pain of medical disorders, of active labor and postoperative pain; also for preoperative or preanesthetic medication, and as an adjunct to anesthesia.

A brochure incorporating analyzed information on Talwin is available. The completeness of the information will permit you to evaluate the role Talwin can play in your practice.

You can depend on Talwin to relieve pain:

WHATEVER the intensity of the pain
the cause of the pain
the site* of the pain
the duration of the pain
the chronicity of the pain
the age† of the patient

Talwin does not require a narcotics prescription

The World Health Organization Expert Committee on Dependence-Producing Drugs concluded that "...there was no need at this time for narcotics control of pentazocine [Talwin] internationally or nationally." (*WHO Tech. Rep. Ser.*, No. 343, 1966, p. 6.)

It is our sincere belief that the discovery of Talwin by Winthrop Laboratories will be of great value to you and your patients for whom you may have to prescribe a potent analgesic.

*Talwin should not be used for patients with increased intracranial pressure, head injury or pathologic brain conditions.

†Until sufficient experience is gained, it should not be administered to children under 12 years of age.

Talwin—brand of pentazocine (as lactate)

Contraindications: *Increased Intracranial Pressure, Head Injury, or Pathologic Brain Conditions in which clouding of sensorium is undesirable.* Talwin (brand of pentazocine) should not be administered in these cases, since drug-induced sedation, dizziness, nausea, or respiratory depression could be misleading.

Precautions: *Pregnancy.* No teratogenic or embryotoxic effects attributable to the use of Talwin have been seen in extensive reproductive studies in animals; however, like all new drugs, Talwin should be given with caution to pregnant women. A large number of patients in labor have received the drug with no adverse reactions other than those that occur with commonly used strong analgesics. However, as with other strong analgesics, Talwin should be used with caution in women delivering premature infants.

Ambulatory Patients. Since sedation, dizziness, and occasional euphoria have been noted, ambulatory patients should be warned not to operate machinery, drive cars, or unnecessarily expose themselves to hazards.

Certain Respiratory Conditions. The possibility that Talwin (brand of pentazocine) may cause respiratory depression should be considered in treatment of patients with bronchial asthma. Talwin (brand of pentazocine) should be administered only with caution and in low dosage to patients with respiratory depression (e.g., from other medication, uremia, or severe infection), obstructive respiratory conditions, or cyanosis.

Patients Dependent on Narcotics. Because Talwin is a narcotic-antagonist, patients dependent on narcotics and receiving Talwin may occasionally experience certain withdrawal symptoms. Talwin should be given with special caution to such patients. It has been observed that some patients previously given narcotic-analgesics for one month or longer had mild withdrawal symptoms when the drug was replaced with the analgesic, Talwin. After a short period of adjustment the subjects were usually able and willing to continue taking Talwin, and relief of pain was satisfactory.

Nonaddicted Patients Receiving Narcotics. Symptoms believed to be indicative of antagonism to the opiate may be observed rarely with administration of Talwin to patients receiving opiates for a short time. Intolerance or untoward reactions are seldom observed after administration of Talwin to patients who have received single doses or who have had limited exposure to narcotics.

Impaired Renal or Hepatic Function. Although laboratory tests have not indicated that Talwin (brand of pentazocine) causes or increases renal or hepatic impairment, the drug should be administered with caution to patients with such impairment. Extensive liver disease appears to predispose to greater side effects (e.g., marked apprehension, anxiety, dizziness, sleepiness) from the usual clinical dose, and may be the result of decreased metabolism of the drug by the liver.

Myocardial Infarction. As with all drugs, Talwin (brand of pentazocine) should be used with caution in patients with myocardial infarction who have nausea or vomiting.

Biliary Surgery. Until further experience is gained with the effects of Talwin on the sphincter of Oddi, the drug should be used with caution in patients about to undergo surgery of the biliary tract.

Adverse Effects: Talwin is relatively free from the undesirable side effects associated with morphine, such as constipation, urinary retention, or severe respiratory depression. Furthermore, Talwin produces less nausea, vomiting, and diaphoresis than meperidine.

In over 12,000 patients who received Talwin intramuscularly, subcutaneously, or intravenously, nausea, the most frequent adverse effect, occurred in approximately 5.0 per cent. In decreasing order of occurrence were vertigo, dizziness or lightheadedness; vomiting; and euphoria. Respiratory depression was reported as an adverse reaction in 1.0 per cent.

The incidence of each of the other adverse effects was well below 1.0 per cent: constipation, circulatory depression, diaphoresis, urinary retention, alteration in mood (nervousness, apprehension, depression, floating feeling), hypertension, sting on injection, headache, dry mouth, flushed skin including plethora, altered uterine contractions during labor, dermatitis including pruritus, dreams, paresthesia, and dyspnea occurred rarely after administration of Talwin (brand of pentazocine). Furthermore, each of the following adverse reactions occurred in less than 0.1 per cent: tachycardia, visual disturbance (blurred vision, diplopia and nystagmus), hallucinations, disorientation, weakness or faintness, muscle tremor, chills, allergic reactions including edema of the face, taste alteration, insomnia, diarrhea, cramps, and miosis; laryngospasm in one patient.

Talwin has not produced severe respiratory embarrassment in adults (never apnea), even with large amounts. A small number of newborn infants whose mothers received Talwin during labor had transient apnea. The incidence of temporary diminution in the rate or strength of uterine contractions is low after administration of Talwin, similar to that following meperidine hydrochloride. (In reporting no interference with normal labor in patients receiving Talwin, one investigator further stated that the drug may increase uterine activity.) Generally, no significant fetal heart rate change occurs.

Laboratory tests of blood and of liver and kidney functions have revealed no significant abnormalities. A minimum and probably insignificant increase in the per cent of eosinophils in peripheral blood counts and bone marrow occurred occasionally.

Talwin is well tolerated by patients with diabetes mellitus, and no changes in insulin requirements have been observed.

Dosage and Administration: *Adults, Excluding Patients in Labor.* Average recommended single parenteral dose is 30 mg., by intramuscular, subcutaneous, or intravenous route; may be repeated every three to four hours. Pain has been relieved in most patients with not more than three doses daily. Infrequently, selected patients have received single doses as high as 60 mg. *Patients in Labor.* A single, intramuscular 30 mg. dose has been most commonly administered. An intravenous 20 mg. dose has given adequate pain relief to some patients in labor when contractions become regular, and this dose may be given two or three times at two- to three-hour intervals, as needed.

Children Under 12 Years of Age. Since clinical experience in children under twelve years of age is limited, the use of Talwin (brand of pentazocine) in this age group is not recommended.

Duration of Therapy. Patients with chronic pain who received Talwin for prolonged periods (e.g., over 300 days) experienced no withdrawal symptoms even when administration was stopped abruptly; furthermore, there was no tolerance to the analgesic effect.

CAUTION. Talwin should not be mixed in the same syringe with soluble barbiturates because precipitation will occur.

Treatment of Overdosage or Respiratory Depression. Talwin has not produced apnea or severe respiratory embarrassment in adults, even in large doses. Occasionally, however, moderate respiratory depression may occur. Means of maintaining proper oxygenation should be available in case of overdosage or respiratory depression, and methylphenidate (Ritalin®) should be administered parenterally. The usual narcotic-antagonists, such as nalorphine, are not effective respiratory stimulants for depression due to Talwin.

How Supplied: ***Ampuls of 1 ml.,*** **containing Talwin® (pentazocine) as lactate equivalent to 30 mg. base and 2.8 mg. sodium chloride, in Water for Injection. Boxes of 10, 25, and 100.**

Multiple dose vials of 10 ml., **each 1 ml. containing Talwin (pentazocine) as lactate equivalent to 30 mg. base, 2 mg. acetone sodium bisulfite, 1.5 mg. sodium chloride, and 1 mg. methylparaben as preservative, in Water for Injection. Boxes of 1.**

The pH of Talwin solutions is adjusted between 4 and 5 with lactic acid and sodium hydroxide.

Winthrop

Winthrop Laboratories, New York, N.Y. 10016

(1150M)

When moderate to severe anxiety strikes home...

(the agitated geriatric)

His teen-age granddaughter won't invite friends home because of his outbursts.

for moderate to severe anxiety

Mellaril®

(thioridazine)

25 mg. t.i.d.

SANDOZ

His slovenly room and habits create more tension.

His disturbances at the table make every meal a nightmare.

His daughter can't please him. There is "just no living with him."

See following page for prescribing information.

When moderate to severe anxiety strikes home...

Anxiety that *seriously interferes* with the individual's performance at work, at home, or in the community may be regarded as *moderate to severe* in degree.

Mellaril often recommends itself to the treatment of moderate to severe anxiety because it

- helps control the most frequent symptoms: marked tension, agitation, apprehension, restlessness, hypermotility
- often alleviates anxiety-induced somatic complaints
- frequently helps strengthen emotional resources
- helps the patient maintain realistic contact with environment, closer harmony with family

Thus, when you consider the anxiety moderate to severe ... consider Mellaril.

Contraindications: Severely depressed or comatose states from any cause, and in association with or following MAO inhibitors; severe hypertensive or hypotensive heart disease.

Precautions: Hypersensitivity reactions (e.g., leukopenia, agranulocytosis) and convulsive seizures are infrequent. Pigmentary retinopathy has been observed where doses in excess of those recommended were used for long periods of time. May potentiate central nervous system depressants, atropine, and phosphorus insecticides. Where complete mental alertness is required, administer the drug cautiously and increase dosage gradually. In addition, orthostatic hypotension (especially in female patients) has been observed. Epinephrine should be avoided in treatment of drug-induced hypotension.

Side Effects: Pseudoparkinsonism and other extrapyramidal disorders are infrequent; drowsiness, especially in high doses early in treatment, may occur; nocturnal confusion, dryness of the mouth, nasal stuffiness, headache, peripheral edema, lactation, galactorrhea, and inhibition of ejaculation are noted on occasion; photosensitivity and other allergic skin reactions may occur but are extremely rare.

Before prescribing, see package insert for full product information.

for moderate to severe anxiety

Mellaril®
(thioridazine)
25 mg. t.i.d.

SANDOZ

---

mudrane®

for

- EMPHYSEMA
- ASTHMA
- CHRONIC BRONCHITIS
- BRONCHIECTASIS

The fast-disintegrating uncoated tablet gives relief in 15 minutes

Each tablet contains:

Potassium Iodide	195 mg.
Aminophylline	130 mg.
Phenobarbital, Caution: May be habit forming	21 mg.
Ephedrine HCl	16 mg.

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Precautions: Usual for aminophylline-ephedrine-phenobarbital. Iodides may cause nausea, long use may cause goiter. Discontinue if symptoms of iodism develop.

Iodide contraindications: tuberculosis, pregnancy.

DOSAGE

One tablet, with full glass of water, 3 or 4 times daily.

Dispensed in bottles of 100 and 1000 tablets.

MUDRANE GG—Formula, dosage and package identical to Mudrane—*except*—100 mg. glyceryl guaiacolate replaces the potassium iodide. The value of Mudrane cannot be enjoyed by a small group in which K.I. is contraindicated. Mudrane GG is prepared for this group.

MUDRANE GG ELIXIR—Four 5 cc teaspoonfuls is equivalent to one Mudrane GG tablet. Dosage adjusted to age and weight of child. Mudrane GG Elixir is for pediatric patients and those who think they cannot swallow tablets. Dispensed in pint and half gallon bottles.

WM. P. POYTHRESS & CO., INC.
RICHMOND, VIRGINIA 23217
Manufacturers of ethical pharmaceuticals since 1856

"My colleagues thought I was crazy!"

Nick Cunningham, M.D., was eminently qualified for any number of promising medical posts here at home. Harvard pre-med. Hopkins medical. London's Guys Hospital. New York's Presbyterian Hospital.

Yet, with this rich professional background, Nick Cunningham chose to become one of the first volunteer doctors in the Peace Corps.

He preferred to go to an African nation where there is one physician for every 80,000 people. Where modern medicine is all but unknown. Where the most stubborn clinical problems exist. Cholera, trachoma, encephalitis, leprosy and a horde of other debilitating diseases.

And for his two-year stretch as a Peace Corps doctor, Nick Cunningham's pay was only $75 a month – plus living expenses. One reason why his colleagues called him crazy.

But Dr. Cunningham saw and realized other compensations in his Peace Corps assignment. A chance to take the best in American medicine to a country desperately needing it. A rare opportunity for professional, cultural and personal growth.

If you've some of the spirit and dedication of Nick Cunningham, the Peace Corps needs you. There are many more requests from nations around the world than doctors to fill them.

If you think you could tackle one of the most challenging and rewarding openings in medicine today, get in touch with us.

Write: THE PEACE CORPS,
Washington, D.C. 20525.

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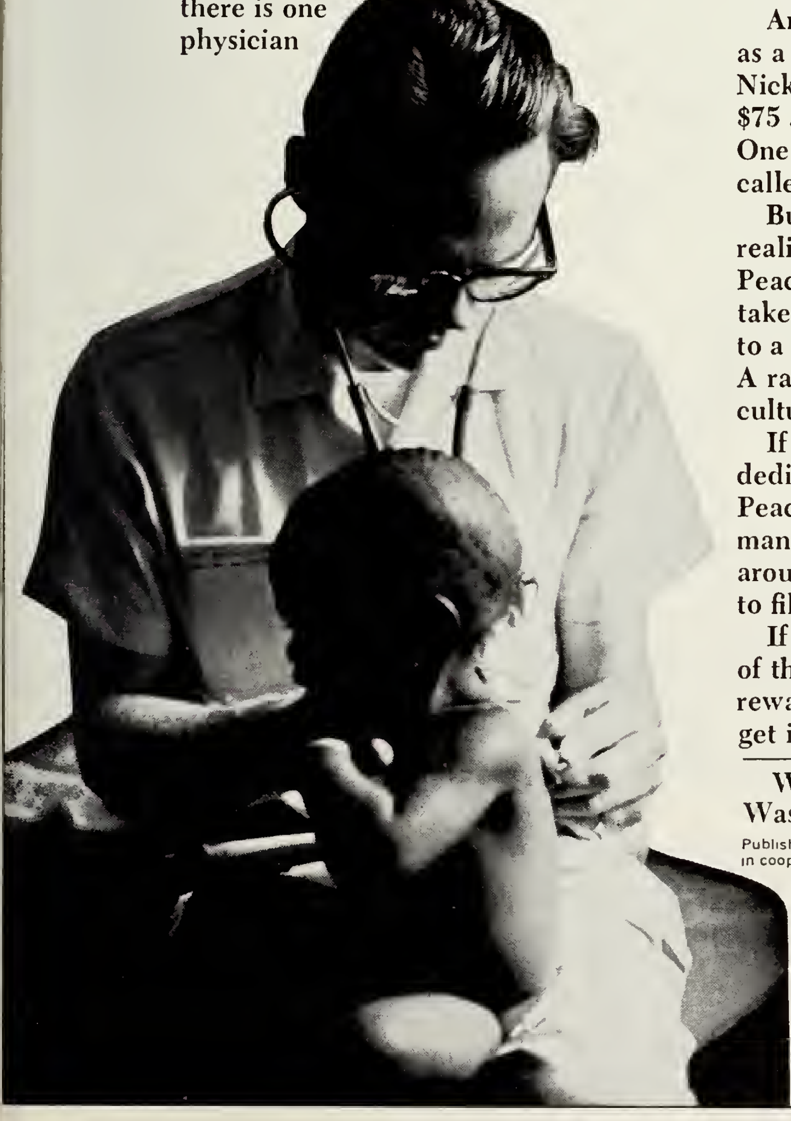


when bursitis hits a 280–lb. tackle, hit back with Butazolidin alka

Indications: Osteoarthritis, rheumatoid arthritis, rheumatoid spondylitis, psoriatic arthritis, acute gout, painful shoulder (peritendinitis, capsulitis, bursitis and acute arthritis of that joint), acute superficial thrombophlebitis.

Contraindications: Edema; danger of cardiac decompensation; history or symptoms of peptic ulcer; renal, hepatic or cardiac damage; history of drug allergy; history of blood dyscrasia. The drug should not be given when the patient is senile or when other potent drugs are given concurrently. Large doses of Butazolidin alka are contraindicated in glaucoma.

Warning: If coumarin-type anticoagulants are given simultaneously, watch for excessive increase in prothrombin time. Instances of severe bleeding have occurred. Pyrazole compounds may potentiate the pharmacologic action of sulfonylurea, sulfonamide-type agents and insulin. Carefully observe patients receiving such therapy. Use with great caution in the first trimester of pregnancy.

Precautions: Before prescribing, carefully select patients, avoidi those responsive to routine measures as well as contraindicated p tients. Obtain a detailed history and a complete physical and laborato examination, including a blood count. The patient should not excee recommended dosage, should be closely supervised and should warned to discontinue the drug and report immediately if fever, so throat, or mouth lesions (symptoms of blood dyscrasia); sudden weig gain (water retention); skin reactions; black or tarry stools or oth evidence of intestinal hemorrhage occur. Make regular blood count Discontinue the drug immediately and institute countermeasures if t white count changes significantly, granulocytes decrease, or immatu forms appear. Use greater care in the elderly and in hypertensive

Adverse Reactions: The most common are nausea, edema and dru rash. Swelling of the ankles or face may be minimized by withholdi dietary salt, reduction in dosage or use of diuretics. In elderly patien and in those with hypertension the drug should be discontinued wi the appearance of edema. The drug has been associated with peptic

r 280-lb. tackles — or 108-lb. housewives — Butazolidin alka can hasten recovery from the
onizing pain of shoulder bursitis.

not for every patient. Check carefully the Contraindications, Warning and
ecautions shown below.

d adverse reactions may occur. The most common are nausea, edema and rash.
rely, agranulocytosis has been reported. All adverse reactions are listed below, too.

ay-for-pay or workaday patients — when they come up with shoulder bursitis and your
nical judgment indicates Butazolidin alka — go with it.

d watch the comeback.

r and may reactivate a latent peptic ulcer. The patient should be in-
ucted to take doses immediately before or after meals or with
lk to minimize gastric upset. Mild drug rashes frequently subside
th reduction of dosage. However, rash accompanied by fever or
ner systemic reactions usually requires withholding medication.
rpuric rash has also been reported. Agranulocytosis, exfoliative
rmatitis, Stevens-Johnson syndrome, or a generalized allergic re-
tion similar to serum sickness may occur and require permanent
thdrawal of medication. Stomatitis, salivary gland enlargement,
miting, vertigo and languor may occur. Leukemia and leukemoid
actions have been reported. While not definitely attributable to the
ug, a causal relationship cannot be excluded. Thrombocytopenic
rpura and aplastic anemia may occur. Confusional states, agitation,
adache, blurred vision, optic neuritis and transient hearing loss have
en.reported, as have hyperglycemia, hepatitis, jaundice, and several
ses of anuria and hematuria. With long-term use, reversible thyroid
perplasia may occur infrequently. Moderate lowering of the red cell
unt due to hemodilution may occur.

6509-V(B)R2

Butazolidin® alka

Capsules

100 mg.	phenylbutazone
100 mg.	dried aluminum hydroxide gel
150 mg.	magnesium trisilicate
1.25 mg.	homatropine methylbromide

Dosage in painful shoulder: Initial: 3 to 6 capsules daily in 3 or 4 equal doses. Trial period: 1 week. Maintenance dosage should not exceed 4 capsules daily; response is often achieved with 1 or 2 capsules daily.

For complete details, please see full prescribing information.

Geigy Pharmaceuticals
Division of Geigy Chemical Corporation, Ardsley, New York

Geigy

Sustained circulatory, respiratory and cerebral stimulation for the

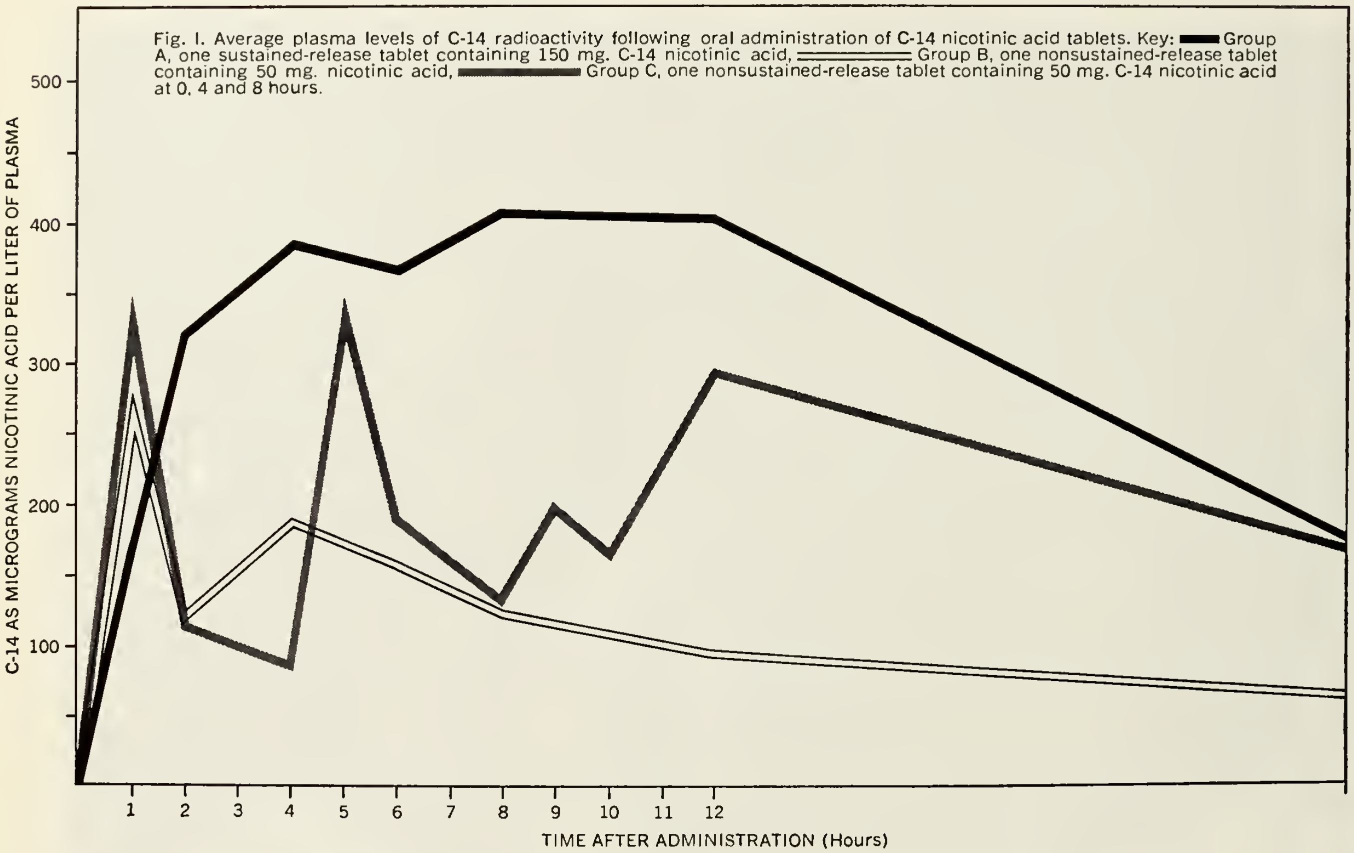


Fig. I. Average plasma levels of C-14 radioactivity following oral administration of C-14 nicotinic acid tablets. Key: ▬ Group A, one sustained-release tablet containing 150 mg. C-14 nicotinic acid, ═ Group B, one nonsustained-release tablet containing 50 mg. nicotinic acid, ▬ Group C, one nonsustained-release tablet containing 50 mg. C-14 nicotinic acid at 0, 4 and 8 hours.

(fewer absent doses by absent-minded patients)

Human volunteer subjects were administered Geroniazol TT tablets with the nicotinic acid component made radioactive with C-14. Plasma and urine samples were analyzed. (See Figures I and II) The radioactive tracer study substantiated the previous clinical evidence that the release of nicotinic acid from the Geroniazol TT tablet produced a gradual rise in plasma levels to a plateau for a total of 12 hours and more.

Such proven sustained activity makes the management of geriatric patients much easier by minimizing the possibility of neglected doses through absent-mindedness or senile confusion. Therapy *can* be continuous on a daily dose of only one Geroniazol TT tablet every 12 hours.

The gradual release of nicotinic acid in Geroniazol TT will provide the well-known peripheral vasodilatation needed in patients with deficient circulation and with a minimum amount (if any) of "flushing." Also, cerebrovascular circulation is complemented by pentylenetetrazol, long-established as a cerebral and respiratory stimulant.

Geroniazol TT improves the typical, unfortunate, signs of senile confusion. Patients become more alert,

aged and debilitated

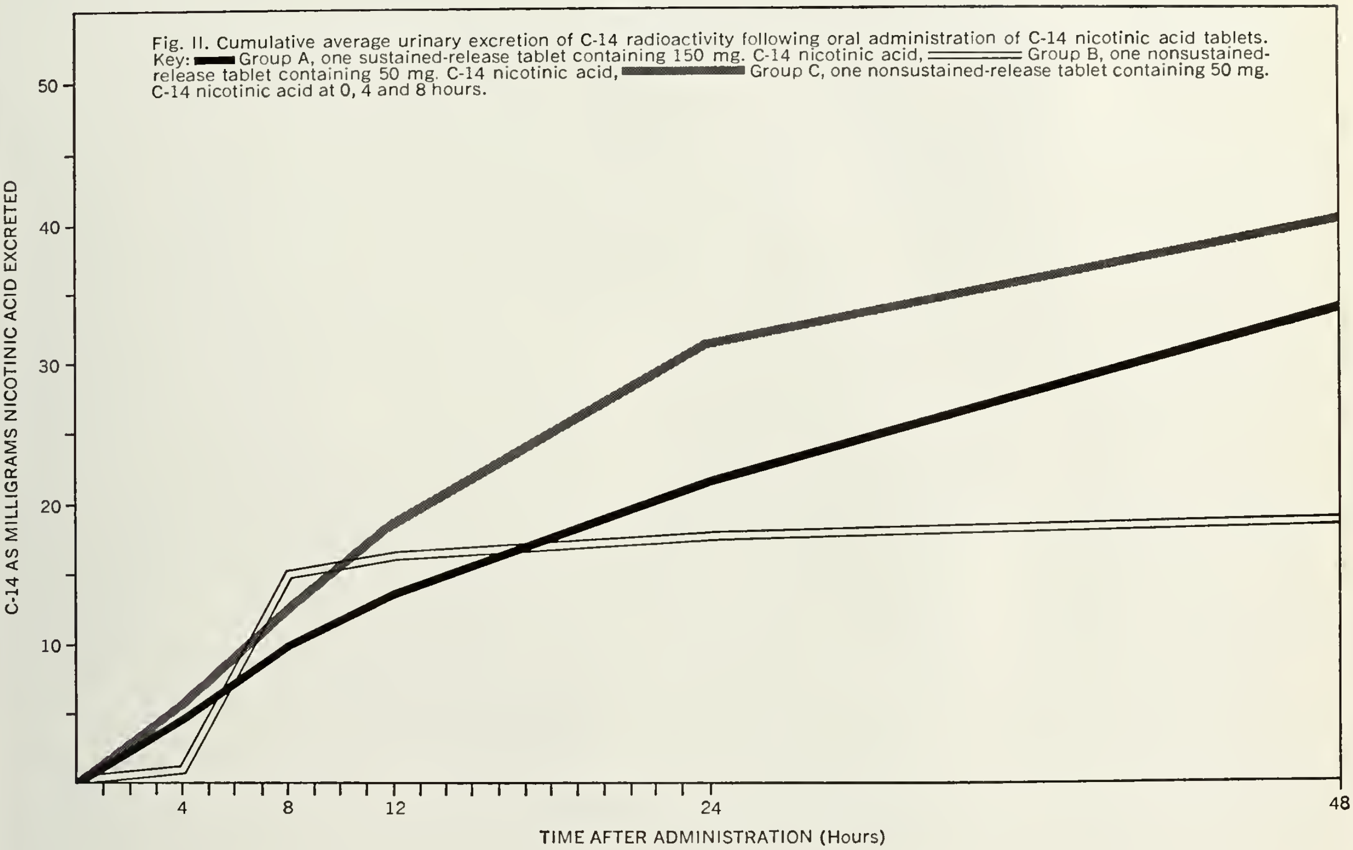


Fig. II. Cumulative average urinary excretion of C-14 radioactivity following oral administration of C-14 nicotinic acid tablets. Key: ▬ Group A, one sustained-release tablet containing 150 mg. C-14 nicotinic acid, ═ Group B, one nonsustained-release tablet containing 50 mg. C-14 nicotinic acid, ▬ Group C, one nonsustained-release tablet containing 50 mg. C-14 nicotinic acid at 0, 4 and 8 hours.

less confused and moody. Personal care, memory, emotional stability, social attention improve. Fatigue, apathy and irritability are reduced.

A prescription for 100 tablets of Geroniazol TT will permit your patients to enjoy the benefits of time-prolonged nicotinic acid/pentylenetetrazol therapy, at an economical price. Dosage is only one tablet every 12 hours.

Contraindications: There are no known contraindications.

Precautions: Exercise caution when treating patients with a low convulsive threshold.

Side Effects: Side effects are rarely encountered, however due to the vasodilatation effect of nicotinic acid, transitory mild nausea, flushing, tingling and pruritus are possible.

Dosage: One tablet every 12 hours.

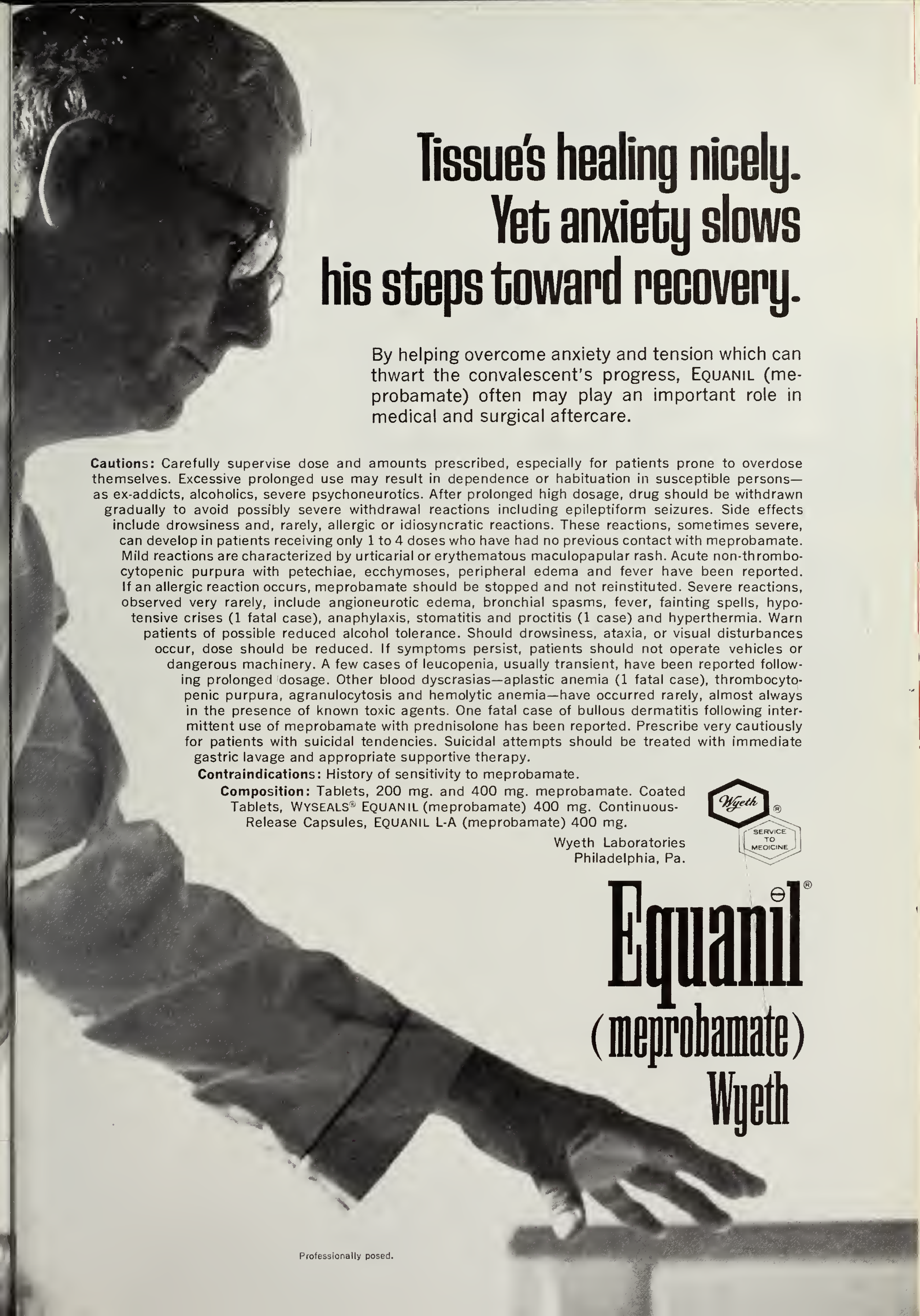
Supplied: Prescribe bottles of 100 tablets, to take advantage of recent price reduction.

References: 1. Report by Nuclear Science & Engineering Corp., Pittsburgh, Pa., in files of Philips Roxane Laboratories. 2. Connolly, R.: W. Virginia Med. J. *56*:263 (Aug.) 1960. 3. Curran, T. R., and Phelps, D. K.: Am. Pract. & Digest Treat. *11*:617 (July) 1960.

"First with the Retro-Steroids"
PHILIPS ROXANE LABORATORIES
Division of Philips Roxane, Inc., Columbus, Ohio
A Subsidiary of Philips Electronics and
Pharmaceutical Industries Corp.

Geroniazol® TT

nicotinic acid 150 mg., pentylenetetrazol 300 mg.
Tempotrol® Time Controlled Tablet



Tissue's healing nicely. Yet anxiety slows his steps toward recovery.

By helping overcome anxiety and tension which can thwart the convalescent's progress, Equanil (meprobamate) often may play an important role in medical and surgical aftercare.

Cautions: Carefully supervise dose and amounts prescribed, especially for patients prone to overdose themselves. Excessive prolonged use may result in dependence or habituation in susceptible persons—as ex-addicts, alcoholics, severe psychoneurotics. After prolonged high dosage, drug should be withdrawn gradually to avoid possibly severe withdrawal reactions including epileptiform seizures. Side effects include drowsiness and, rarely, allergic or idiosyncratic reactions. These reactions, sometimes severe, can develop in patients receiving only 1 to 4 doses who have had no previous contact with meprobamate. Mild reactions are characterized by urticarial or erythematous maculopapular rash. Acute non-thrombocytopenic purpura with petechiae, ecchymoses, peripheral edema and fever have been reported. If an allergic reaction occurs, meprobamate should be stopped and not reinstituted. Severe reactions, observed very rarely, include angioneurotic edema, bronchial spasms, fever, fainting spells, hypotensive crises (1 fatal case), anaphylaxis, stomatitis and proctitis (1 case) and hyperthermia. Warn patients of possible reduced alcohol tolerance. Should drowsiness, ataxia, or visual disturbances occur, dose should be reduced. If symptoms persist, patients should not operate vehicles or dangerous machinery. A few cases of leucopenia, usually transient, have been reported following prolonged dosage. Other blood dyscrasias—aplastic anemia (1 fatal case), thrombocytopenic purpura, agranulocytosis and hemolytic anemia—have occurred rarely, almost always in the presence of known toxic agents. One fatal case of bullous dermatitis following intermittent use of meprobamate with prednisolone has been reported. Prescribe very cautiously for patients with suicidal tendencies. Suicidal attempts should be treated with immediate gastric lavage and appropriate supportive therapy.

Contraindications: History of sensitivity to meprobamate.

Composition: Tablets, 200 mg. and 400 mg. meprobamate. Coated Tablets, Wyseals® Equanil (meprobamate) 400 mg. Continuous-Release Capsules, Equanil L-A (meprobamate) 400 mg.

Wyeth Laboratories
Philadelphia, Pa.

Wyeth®
SERVICE TO MEDICINE

Equanil®
(meprobamate)
Wyeth

Professionally posed.

LACTINEX®

TABLETS & GRANULES

- **to help restore and stabilize the intestinal flora**
- **for fever blisters and canker sores of herpetic origin**

LACTINEX contains both *Lactobacillus acidophilus* and *L. bulgaricus* in a standardized viable culture, with the naturally occurring metabolic products produced by these organisms.

First introduced to help restore the flora of the intestinal tract in infants and adults,[1,2,3,4] LACTINEX has also been shown to be useful in the treatment of fever blisters and canker sores of herpetic origin.[5,6,7,8]

No untoward side effects have been reported to date.

Literature on indications and dosage available on request.

References:

(1) Siver, R. H.: CMD, *21*:109, September 1954. (2) Frykman, H. H.: Minn. Med., *38*:19-27, January 1955. (3) McGivney, J.: Tex. State Jour. Med., *51*:16-18, January 1955. (4) Quehl, T. M.: Jour. of Florida Acad. Gen. Prac., *15*:15-16, October 1965. (5) Weekes, D. J.: N.Y. State Jour. Med., *58*:2672-2673, August 1958. (6) Weekes, D. J.: EENT Digest, *25*:47-59, December 1963. (7) Abbott, P. L.: Jour. Oral Surg., Anes., & Hosp. Dental Serv., 310-312, July 1961. (8) Rapoport, L. and Levine, W. I.: Oral Surg., Oral Med. & Oral Path., *20*:591-593, November 1965.

HYNSON, WESTCOTT & DUNNING, INC.

HW&D BALTIMORE, MARYLAND 21201

(LX04)

LX LX LX

Dulcolax®

bisacodyl

DU-5255

Few drugs work as predictably as Dulcolax. You can expect that when your office patient takes Dulcolax at home, it will be as effective as you said it would be. Your patient will be gratified, too.

The reliability of Dulcolax stems from its unique mode of action. The drug works directly on nerve endings in the colonic mucosa, producing normal peristalsis throughout the large intestine. It does not rely on systemic absorption for its effect.

This reliable action provides prompt relief of constipation. It also makes Dulcolax particulary useful for prepping the bowel for special procedures. In short, it makes Dulcolax ideal for your office practice.

Dulcolax acts so surely that the time of evacuation can often be closely predicted. Dulcolax tablets taken at night almost invariably result in a bowel movement soon after waking the following morning. Dulcolax suppositories generally work in 15 to 20 minutes, almost always within the hour.

General Dosage Information: *Adults:* When an ordinary laxative effect is desired, 1 to 3 tablets or 1 suppository usually suffices. Tablets must be swallowed whole, not chewed or crushed, and should not be taken within one hour of antacids or milk. *Children:* 1 or 2 tablets, depending on age and severity of condition. Tablets must not be given to a child too young to swallow them whole. For infants and children under 2 years of age, half a suppository is usually effective. Above this age a whole suppository is usually advisable. Side Effects: As with any laxative, abdominal cramps are occasionally noted, particularly in severely constipated persons. High dosage may result in loose, unformed stools. Contraindication: Contraindicated only in acute surgical abdomen. Availability: Tablets (5 mg.) and suppositories (10 mg.). By prescription or recommendation.

Under license from Boehringer Ingelheim G.m.b.H.

Geigy Pharmaceuticals
Division of Geigy Chemical Corporation, Ardsley, N.Y.

You may be prescribing Hygroton®, chlorthalidone

You usually prescribe one tablet daily,
but every once in a while you like
to cut the dosage. So instead of giving
the 100 mg. tablet every other day
or breaking it in half, why not prescribe
the new half-strength tablet every day?

See next page for a brief precautionary
statement.

but you
don't know the
half of it.

New Hygroton
50 mg.

For a clinical supply,
please mail us this coupon
with one of your
prescription blanks.

Geigy Pharmaceuticals
Division of
Geigy Chemical Corporation
Ardsley, New York 10502

DEPT. 7

Broad scope diuretic

Hygroton®
chlorthalidone

Geigy

Hygroton is indicated in certain conditions where the newer nonthiazide diuretics are not recommended, e.g. hypertension, edema of pregnancy, premenstrual edema, edema in obesity states, steroid edema.

However, the newer diuretics are probably superior to Hygroton in acute pulmonary edema and the nephrotic syndrome or any condition where the glomerular filtration rate is significantly low.

Indications

Hypertension

Such as hypertension with or without congestive failure, where Hygroton can be used alone or in conjunction with other agents
(*Precaution:* Antihypertensive therapy with Hygroton should always be initiated cautiously in post-sympathectomy patients and in patients receiving ganglionic blocking agents or other potent antihypertensive drugs, or curare. Reduce dosage of concomitant antihypertensive agents by at least one-half. Barbiturates, narcotics or alcohol may potentiate hypotension.)

Edema

Such as edema associated with:
congestive heart failure
or renal disease
(*Precaution:* Because of the possibility of progression of renal damage, periodic determination of the BUN is indicated. Discontinue if the BUN rises.)
or hepatic cirrhosis
(Hypoproteinemia, if present, must be corrected concomitantly. *Precaution:* Take special care: discontinue if liver dysfunction is aggravated, since hepatic coma may be precipitated.)
or steroid administration
or obesity
or the premenstrual syndrome
or pregnancy, including toxemia
(*Warning:* Use with caution in pregnant patients, since the drug may cross the placental barrier and adverse reactions which may occur in the adult, e.g. thrombocytopenia, hyperbilirubinemia, altered carbohydrate metabolism, etc., are potential problems in the newborn.)

Contraindications

Severe Renal or Hepatic Disease and Demonstrated Hypersensitivity

Other general warnings, precautions and adverse reactions

Warning: With the administration of enteric-coated potassium supplements, which should be used only when adequate dietary supplementation is not practical, the possibility of small bowel lesions (obstruction, hemorrhage, and perforation) should be kept in mind. Surgery for these lesions has frequently been required and deaths have occurred. Discontinue enteric-coated potassium supplements immediately if abdominal pain, distention, nausea, vomiting, or gastrointestinal bleeding occur.

Precautions: Electrolyte imbalance, sodium and/or potassium depletion may occur. If potassium depletion should occur during therapy, Hygroton should be discontinued and potassium supplements given, provided the patient does not have marked oliguria.

Take special care in severe ischemic heart disease and in patients receiving corticosteroids, ACTH, or digitalis. Salt restriction is not recommended.

Adverse reactions: Nausea, gastric irritation, vomiting, anorexia, constipation and cramping, dizziness, weakness, restlessness, hyperglycemia, hyperuricemia, headache, muscle cramps, orthostatic hypotension, aplastic anemia, leukopenia, thrombocytopenia, agranulocytosis, dysuria, impotence, transient myopia, skin rashes, urticaria, purpura, necrotizing angiitis, acute gout, and pancreatitis when epigastric pain or unexplained G.I. symptoms develop after prolonged administration. Other reactions reported with this class of compounds include: jaundice, xanthopsia, paresthesia, and photosensitization.

Average Dosage: 50-100 mg. with breakfast daily.

Availability: White, single-scored tablets of 100 mg. and aqua tablets of 50 mg. in bottles of 100 and 1000.

Please see full Prescribing Information.

Geigy Pharmaceuticals
Division of Geigy Chemical Corporation
Ardsley, New York 10502

HY-5210

A Building Block approach to treating hypertension

With these three therapeutic building blocks you can create a once-a-day regimen to fit almost any degree of hypertension. See the following pages for details . . .

Consider starting your hypertensives on this basic thiazide

ABBOTT

A single daily dose of Enduron provides sodium excretion around the clock

Enduron is a true 24-hour single-dose thiazide. Its sodium excretion is not squeezed into an abrupt peak during the first several hours. It is well-sustained in a plateau-like effect—with little reduction for the first 12 hours, and decline thereafter only gradual.

Potassium loss, by contrast, is low. It reaches an early minor peak, then subsides rapidly. Moreover, since dosage is but once a day, there is but one daily peak of potassium loss. As with all thiazides, however, dietary potassium supplementation should also be considered, especially in long or intensive therapy.

Use Enduron as an ideal starting therapy in mild hypertension. Use it too, as a basic therapeutic building block with which other agents can be joined, for managing your more resistant hypertensives.

Once a day, every day

ENDURON®
METHYCLOTHIAZIDE

DAILY DOSAGE RANGE	Minimum	Usual	Intermediate	Maximum
	2.5 mg. tablet	5 mg. tablet	7.5 mg.	10 mg.

See Brief Summary on final page of advertisement.

To build added response, shift to Enduronyl

The deserpidine component adds enhanced antihypertensive activity

The rauwolfia component of Enduronyl is deserpidine (Harmonyl®), a purified crystalline alkaloid supplied only by Abbott. It augments Enduron with its own antihypertensive and tranquilizing action.

Thus the combined clinical effect of these two therapeutic building blocks in Enduronyl is greater than can ordinarily be achieved with either alone.

To add flexibility, Enduronyl comes in two strengths: regular and Forte. Both provide 5 mg. of Enduron. The variation is where most helpful: in the deserpidine. The tablets are scored, and give a surprisingly wide and economical choice of once-a-day doses (see below).

Choose Enduronyl for your patients in the broad range of mild to moderate hypertension. Patient acceptance is excellent!

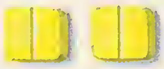
Once a day, every day

ENDURONYL®

METHYCLOTHIAZIDE 5 MG. WITH DESERPIDINE 0.25 MG.

ENDURONYL FORTE

METHYCLOTHIAZIDE 5 MG. WITH DESERPIDINE 0.5 MG.

	Minimum	Usual	Intermediate	Maximum
DAILY DOSAGE RANGE	 2.5 mg. methyclothiazide 0.125 mg. deserpidine	 5 mg. methyclothiazide 0.25 mg. deserpidine	 7.5 mg. methyclothiazide 0.375 mg. deserpidine	 10 mg. methyclothiazide 0.5 mg. deserpidine
DAILY DOSAGE RANGE	 2.5 mg. methyclothiazide 0.25 mg. deserpidine	 5 mg. methyclothiazide 0.5 mg. deserpidine	 7.5 mg. methyclothiazide 0.75 mg. deserpidine	 10 mg. methyclothiazide 1 mg. deserpidine

See Brief Summary on final page of advertisement.

707075-R

Eutonyl affords a different kind of basic therapy for moderate to severe cases

ABBOTT

Effect tied to reduced peripheral vascular resistance; no central depressant action

Eutonyl is a unique nonhydrazine agent. It is reported to act by reducing peripheral vascular resistance.[1,2]

In clinical trials, significant reductions in mean blood pressure were seen in 84% of patients studied—all were moderate to severe cases. Eutonyl lowers diastolic in proportion to systolic, and in about half of the cases studied, reductions in the sitting and recumbent positions were nearly as great as in the standing position.

Most important: There is no central depressant action. In fact, some patients reported an *increased* sense of well being.

Here, then, is a highly effective *basic treatment* for moderate to severe cases—and one that will not hamper your patient with lethargy or drowsiness while on treatment.

Once a day, every day

EUTONYL®
PARGYLINE HYDROCHLORIDE

DAILY DOSAGE RANGE	Minimum	Usual starting	Intermediate	Maximum
	10 mg. tablet	25 mg. tablet	50 mg. tablet or as needed	200 mg.

---

1. Brest, A. N., et al., Cardiac and Renal Hemodynamic Response to Pargyline, Ann. N. Y. Acad. Sci., 107-1016, 1963.
2. Winsor, T., Pargyline Hydrochloride, Hypertension, Urinary Tryptamine, and Vascular Reflexes, Geriatrics, 19:598, Aug., 1964.

See Brief Summary on final page of advertisement.

Eutron adds thiazide for enhanced therapy with milder side effects

ABBOTT

Only a 7/4 mm. span between standing and recumbent pressures in clinical trials—reduced chance of orthostatic hypotension

The combining of Eutonyl and Enduron in Eutron permits a significantly greater antihypertensive effect than with either agent used alone. This in turn may allow therapeutic success with lesser dosage—and correspondingly milder side effects.

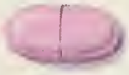
A significant finding in clinical trials was the drug's action in lowering blood pressure to *nearly equal levels in all body positions*. Total average spread between standing and recumbent readings (after treatment) was only 7/4 mm. Hg.

Thus, in your moderate to severe cases, Eutron affords a usually smooth course of therapy, often with reduced likelihood of orthostatic effects. (The usual precautions against rising suddenly, of course, will always apply.) And, because of the thiazide component, Eutron may be used in the presence of congestive heart failure.

Once a day, every day

EUTRON™

PARGYLINE HYDROCHLORIDE 25 MG.
WITH METHYCLOTHIAZIDE 5 MG.

	Minimum	Usual starting	Intermediate	Maximum
DAILY DOSAGE RANGE				
	12.5 mg. pargyline hydrochloride and 2.5 mg. methyclothiazide	25 mg. pargyline hydrochloride and 5 mg. methyclothiazide	37.5 mg. pargyline hydrochloride and 7.5 mg. methyclothiazide	50 mg. pargyline hydrochloride and 10 mg. methyclothiazide

See Brief Summary on final page of advertisement.

TM—Trademark

707075-R

ENDURON® | ENDURONYL

METHYCLOTHIAZIDE

Each tablet contains
Methyclothiazide 5 mg. with
Deserpidine 0.25 mg. or 0.5 mg.

Indications: Enduron is used to control edema and mild to moderate hypertension; also used with other drugs for hypertension. Enduronyl is used in mild to moderately severe hypertension; when used with Enduronyl, more potent agents can be given at reduced dosage to minimize undesirable side effects.

Contraindications: Neither Enduron nor Enduronyl should be used in severe renal disease (except nephrosis) or shutdown; in severe hepatic disease or impending hepatic coma; in patients sensitive to thiazides. Hepatic coma has been reported as a result of hypokalemia in patients receiving thiazides.

Enduronyl is contraindicated in patients with severe mental depression and suicidal tendencies, active peptic ulcer, or ulcerative colitis.

Warnings: Consider possible sensitivity reactions in patients with a history of allergy or asthma. If added potassium intake is indicated, dietary supplementation is recommended. Enteric-coated potassium tablets should be reserved for cautious use only when adequate dietary supplementation is not practical because those tablets may induce serious or fatal small bowel lesions consisting of stenosis with or without ulceration. These small bowel lesions have caused obstruction, hemorrhage and perforation frequently requiring surgery. Medication should be discontinued immediately if abdominal pain, distension, nausea, vomiting or GI bleeding occurs.

Precautions: Use thiazides with caution in severe renal dysfunction, impaired hepatic function, or progressive liver disease. In surgical patients, thiazides may reduce the response to vasopressors and increase the response to tubocurarine. Use thiazides with caution in pregnancy (bone marrow depression, thrombocytopenia, or altered carbohydrate metabolism have been reported in certain newborn infants). Also reported have been: blood dyscrasias including thrombocytopenia with purpura, agranulocytosis and aplastic anemia; elevations of BUN, serum uric acid, or blood sugar. Symptomatic gout may be induced. Antihypertensive response may be enhanced following sympathectomy.

Use Enduronyl with caution in patients with a history of peptic ulcer, as rauwolfias may increase gastric secretion. Discontinue at the first sign of mental depression. Rauwolfia alkaloids may increase hypotensive effects of surgery or anesthesia, and should be discontinued two weeks prior. They also lower the convulsive threshold and shorten seizure latency. In epilepsy, dosage adjustment of anticonvulsant medication may be necessary. Alcohol, barbiturates, or narcotics may potentiate action of deserpidine.

Adverse Reactions: During intensive or prolonged therapy, guard against hypochloremic alkalosis and hypokalemia (especially the latter if patient is on digitalis). All patients should be observed for signs of hyponatremia ("low-salt" syndrome). Reported thiazide reactions include: anorexia, nausea, vomiting, diarrhea, headache, skin rash, dizziness, paresthesia, weakness, photosensitivity, jaundice, and pancreatitis.

Reported rauwolfia reactions include: nasal stuffiness, nausea, weight gain, diarrhea, aggravation of peptic ulcer, epistaxis, skin eruption, and reduction of libido and potency. Excessive drowsiness, fatigue, weakness, and nightmares may signal early signs of mental depression.

EUTONYL® | EUTRON™

PARGYLINE HYDROCHLORIDE

Each tablet contains
Pargyline Hydrochloride 25 mg.
with Methyclothiazide 5 mg.

Indications: For treatment of patients with moderate to severe hypertension, especially those with severe diastolic hypertension. Not recommended for patients with mild or labile hypertension amenable to therapy with sedatives and/or thiazide diuretics alone. It is desirable to establish the dosage of Eutron by administering component drugs separately.

TM-Trademark.

Contraindications: Pheochromocytoma, advanced renal disease, increasing renal dysfunction, paranoid schizophrenia and hyperthyroidism. Hepatic coma has been reported as consequence of hypokalemia with thiazide therapy. Until further experience is gained not recommended for patients with malignant hypertension, children under 12, or pregnant patients.

Concomitant use of the following is contraindicated: other monoamine oxidase inhibitors; parenteral forms of reserpine or guanethidine; sympathomimetic drugs; foods high in tyramine such as cheese; imipramine and amitriptyline, or similar antidepressants; methyldopa. 2 week interval should separate therapy and use of these agents.

Methyclothiazide is contraindicated in patients with known sensitivity to thiazides.

Warnings: Pargyline hydrochloride is a monoamine oxidase inhibitor. Warn patients against eating cheese, and using alcohol, proprietary drugs or other medication without the knowledge of the physician. When indicated, alcohol, narcotics (meperidine should be avoided), antihistamines, barbiturates, chloral hydrate, and other hypnotics, sedatives, tranquilizers, or caffeine, may be used cautiously in reduced dosage. In emergency surgery ¼ to ⅕ the usual dose of narcotics, analgesics, and other premedications should be used avoiding parenteral administration where possible. Carefully adjust dose of anesthetics to response of patient. Withdraw pargyline two weeks before elective surgery.

Warn patients about the possibility of postural hypotension. Those with angina or coronary artery disease should not increase physical activity with an improvement in well being. Pargyline may lower blood sugar.

Avoid use of enteric-coated potassium tablets, as these may induce serious or fatal small-bowel lesions consisting of stenosis with or without ulceration. These small-bowel lesions have caused obstruction, hemorrhage and perforation frequently requiring surgery. Medication should be discontinued immediately if abdominal pain, distension, nausea, vomiting or GI bleeding occurs. These products contain no added potassium salts and if added potassium intake is desired, dietary supplementation is recommended. Coated potassium tablets should be reserved for cautious use when adequate dietary supplementation is impractical. In patients with a history of allergy or asthma the possibility of sensitivity reactions should be considered.

Precautions: Measure blood pressure while patient is standing to determine antihypertensive effect. Use with caution in hyperactive or hyperexcitable persons. Such persons may show increased restlessness and agitation. Withdraw drug during acute febrile illness. Watch patients with impaired renal function for increasing drug effects or elevation of BUN and other evidence of progressive renal failure; withdraw drug if such alterations persist and progress. Use with caution in patients with liver disease. As with all new drugs, complete blood counts, urinalyses, and liver function tests should be performed periodically. With prolonged therapy, examine patients for change in color perception, visual fields and fundi. Also reported have been: blood dyscrasias including thrombocytopenia with purpura, agranulocytosis and aplastic anemia; elevations of BUN, serum uric acid, or blood sugar. Symptomatic gout may be induced. In surgical patients thiazides may reduce response to vasopressors and increase response to tubocurarine.

Adverse Reactions: Pargyline may be associated with orthostatic hypotension. Mild constipation, slight edema, dry mouth, sweating, increased appetite, arthralgia, nausea and vomiting, headache, insomnia, difficulty in micturition, nightmares, impotence, delayed ejaculation, rash, and purpura have been encountered with pargyline. Hyperexcitability, increased neuromuscular activity (muscle twitching) and other extrapyramidal symptoms have been reported in a few patients with reduced cardiac reserve.

During intensive or prolonged therapy, guard against hypochloremic alkalosis and hypokalemia (especially the latter if patient is on digitalis). Observe all patients for signs of hyponatremia ("low salt" syndrome).

Reported thiazide reactions also include anorexia, nausea, vomiting, diarrhea, headache, dizziness, paresthesia, weakness, skin rash, photosensitivity, jaundice, and pancreatitis. Nocturia has been observed with the combination.

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Warnings: Caution patients about possible combined effects with alcohol and other CNS depressants. As with all CNS-acting drugs, caution patients against hazardous occupations requiring complete mental alertness (e.g., operating machinery, driving). Though physical and psychological dependence have rarely been reported on recommended doses, use caution in administering to addiction-prone individuals or those who might increase dosage; withdrawal symptoms (including convulsions), following discontinuation of the drug and similar to those seen with barbiturates, have been reported. Use of any drug in pregnancy, lactation, or in women of childbearing age requires that its potential benefits be weighed against its possible hazards.

Precautions: In the elderly and debilitated, and in children over six, limit to smallest effective dosage (initially 10 mg or less per day) to preclude ataxia or oversedation, increasing gradually as needed and tolerated. Not recommended in children under six. Though generally not recommended, if combination therapy with other psychotropics seems indicated, carefully consider individual pharmacologic effects, particularly in use of potentiating drugs such as MAO inhibitors and phenothiazines. Observe usual precautions in presence of impaired renal or hepatic function. Paradoxical reactions (e.g., excitement, stimulation and acute rage) have been reported in psychiatric patients and hyperactive aggressive children. Employ usual precautions in treatment of anxiety states with evidence of impending depression; suicidal tendencies may be present and protective measures necessary. Variable effects on blood coagulation have been reported very rarely in patients receiving the drug and oral anticoagulants; causal relationship has not been established clinically.

Adverse Reactions: Drowsiness, ataxia and confusion may occur, especially in the elderly and debilitated. These are reversible in most instances by proper dosage adjustment, but are also occasionally observed at the lower dosage ranges. In a few instances syncope has been reported. Also encountered are isolated instances of skin eruptions, edema, minor menstrual irregularities, nausea and constipation, extrapyramidal symptoms, increased and decreased libido—all infrequent and generally controlled with dosage reduction; changes in EEG patterns (low-voltage fast activity) may appear during and after treatment; blood dyscrasias (including agranulocytosis), jaundice and hepatic dysfunction have been reported occasionally, making periodic blood counts and liver-function tests advisable during protracted therapy.

Usual Daily Dosage: Individualize for maximum beneficial effects. *Oral*—Adults: Mild and moderate anxiety and tension, 5 or 10 mg t.i.d. or q.i.d.; severe states, 20 or 25 mg t.i.d. or q.i.d. Geriatric patients: 5 mg b.i.d. to q.i.d. (See Precautions.)

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The views expressed in this publication are those of the writers and do not necessarily reflect the opinions of the South Carolina Medical Association.

Contributions of Original Articles

Length—Short articles of about 2,500 words (about 8 typewritten pages, double spaced) are preferred. Longer articles ordinarily will defer to the shorter ones in schedule of publication.

Manuscripts—Manuscripts should be typewritten, double spaced, and the original and a carbon copy submitted.

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Prescribing information on next page.

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Warning—In renal impairment, usual doses may lead to excessive accumulation and liver toxicity. Under such conditions, lower than usual doses are indicated, and, if therapy is prolonged, serum level determinations may be advisable. A photodynamic reaction to natural or artificial sunlight has been observed. Small amounts of drug and short exposure may produce an exaggerated sunburn reaction which may range from erythema to severe skin manifestations. In a smaller proportion, photoallergic reactions have been reported. Patients should avoid direct exposure to sunlight and discontinue drug at the first evidence of skin discomfort. Necessary subsequent courses of treatment with tetracyclines should be carefully observed.

Precautions—Overgrowth of nonsusceptible organisms may occur. Constant observation is essential. If new infections appear, appropriate measures should be taken. In infants, increased intracranial pressure with bulging fontanels has been observed. All signs and symptoms have disappeared rapidly upon cessation of treatment.

Side Effects—Gastrointestinal system—anorexia, nausea, vomiting, diarrhea, stomatitis, glossitis, enterocolitis, pruritus ani. Skin—maculopapular and erythematous rashes. A rare case of exfoliative dermatitis has been reported. Photosensitivity; onycholysis and discoloration of the nails (rare). Kidney—rise in BUN, apparently dose related. Hypersensitivity reactions—urticaria, angioneurotic edema, anaphylaxis. Teeth — dental staining (yellow-brown) in children of mothers given this drug during the latter half of pregnancy, and in children given the drug during the neonatal period, infancy and early childhood. Enamel hypoplasia has been seen in a few children. If adverse reaction or idiosyncrasy occurs discontinue medication and institute appropriate therapy.

Average Adult Daily Dosage: 150 mg q.i.d. or 300 mg b.i.d. Should be given 1 hour before or 2 hours after meals, since absorption is impaired by the concomitant administration of high calcium content drugs, foods and some dairy products. Treatment of streptococcal infections should continue for 10 days, even though symptoms have subsided.

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Now available: V-Cillin K®, Pediatric, for Oral Solution, 250 mg. (400,000 units) per 5 cc. of solution.

(See next page for prescribing information.)

New 500 mg. tablets...a more convenient way to give high doses

Description: V-Cillin K is the potassium salt of V-Cillin® (phenoxymethyl penicillin, Lilly). This chemically improved form combines acid stability with immediate solubility and rapid absorption. Higher serum levels are obtained more rapidly with this penicillin than with equal oral doses of penicillin G. The higher serum levels and acid stability of V-Cillin K make it a more dependable penicillin for oral use.

V-Cillin K, Pediatric, is an oral solution of clinically proved V-Cillin K in teaspoon dosage form. When mixed as directed, each 5 cc. (approximately one teaspoonful) will contain 125 mg. (200,000 units) phenoxymethyl penicillin as the potassium salt.

Indications: V-Cillin K has been shown to be effective in the treatment of streptococcus, pneumococcus, and gonococcus infections as well as infections caused by sensitive strains of staphylococci. It may be used for the prophylaxis of streptococcus infections in patients with a history of rheumatic fever and for the prevention of bacterial endocarditis after tonsillectomy and tooth extraction in those patients with a history of rheumatic fever or congenital heart disease.

Contraindication: V-Cillin K should not be administered to a patient with a history of penicillin hypersensitivity.

Warnings: In rare instances, the use of penicillin may cause acute anaphylaxis which may prove fatal unless promptly controlled. This type of reaction appears more frequently in patients with a history of sensitivity reactions to penicillin and in those with bronchial asthma or other allergies. Resuscitative drugs should be readily available for emergency administration. These include epinephrine and pressor drugs (as well as oxygen for inhalation) for relief of immediate allergic manifestations and antihistamines and corticosteroids for delayed effects.

Precautions: V-Cillin K should be used cautiously, if at all, in a patient with a strongly positive history of allergy.

In prolonged therapy with penicillin, and particularly with high parenteral dosage schedules, frequent evaluation of the renal and hematopoietic systems is recommended.

In suspected staphylococcus infections, proper laboratory studies (including sensitivity tests) should be performed.

The use of penicillin may be associated with the overgrowth of pencillin-insensitive organisms. In such cases, its administration should be discontinued, and appropriate measures should be taken.

Adverse Reactions: Although serious allergic reactions are much less common with administration of oral penicillin than with intramuscular forms, manifestations of penicillin allergy may occur.

Penicillin is a substance of low toxicity, but it does possess a significant index of sensitization. The following hypersensitivity reactions associated with the use of penicillin have been reported: skin rashes ranging from maculopapular eruptions to exfoliative dermatitis; urticaria; and reactions resembling serum sickness, including chills, fever, edema, arthralgia, and prostration. Severe and often fatal anaphylaxis has occurred (see Warnings). Hemolytic anemia, leukopenia, thrombocytopenia, and nephropathy are rarely observed side-effects and are usually associated with high parenteral dosage.

Administration and Dosage: For Tablets V-Cillin K and for V-Cillin K, Pediatric, the usual dosage ranges from 125 mg. (200,000 units) three times a day to 500 mg. (800,000 units) every four hours. For infants, the daily dosage may be 50 mg. per Kg. of body weight divided into three doses.

Beta-hemolytic streptococcus infections without associated bacteremia may be treated with 200,000 to 400,0000 units three times a day. Therapy should be continued for a minimum of ten days to prevent development of rheumatic fever and/or other serious complications. Dosage for routine streptococcus prophylaxis in patients with a history of rheumatic fever or congenital heart disease may be 200,000 units once or twice daily. When such patients undergo tonsillectomy, tooth extraction, or other minor surgery, the prophylactic dose should be 500,000 units every six hours given two days prior to surgery and for two days postoperatively. If oral medication is not feasible on the day of surgery, parenteral therapy should be considered. Mild to moderately severe pneumococcus pneumonia has been treated effectively with 250 mg. every six hours.

In staphylococcus infections, 400,000 units or more should be given every six to eight hours in conjunction with indicated surgical procedures.

For gonorrhea in males, 500 mg. (800,000 units) every four hours for three doses may be employed; in females, 500 mg. every four hours for six doses are recommended. Refractory infections generally respond to a second treatment three to four days following completion of the first. Treatment of gonorrhea with severe complications should be individualized, with prolonged and intensive treatment. Patients with a suspected lesion of syphilis should have a dark-field examination before receiving penicillin and monthly serologic tests for a minimum of three months.

How Supplied: Tablets V-Cillin K, U.S.P., 125 mg. (200,000 units), in bottles of 50 and 100; and 250 mg. (400,0000 units) and 500 mg. (800,000 units), in bottles of 24 and 100.

V-Cillin K, Pediatric, for Oral Solution, 125 mg. (200,000 units) per 5 cc. of solution, in 40, 80, and 150-cc.-size packages. [032067]

Additional information available to physicians upon request. Eli Lilly and Company, Indianapolis, Indiana 46206.

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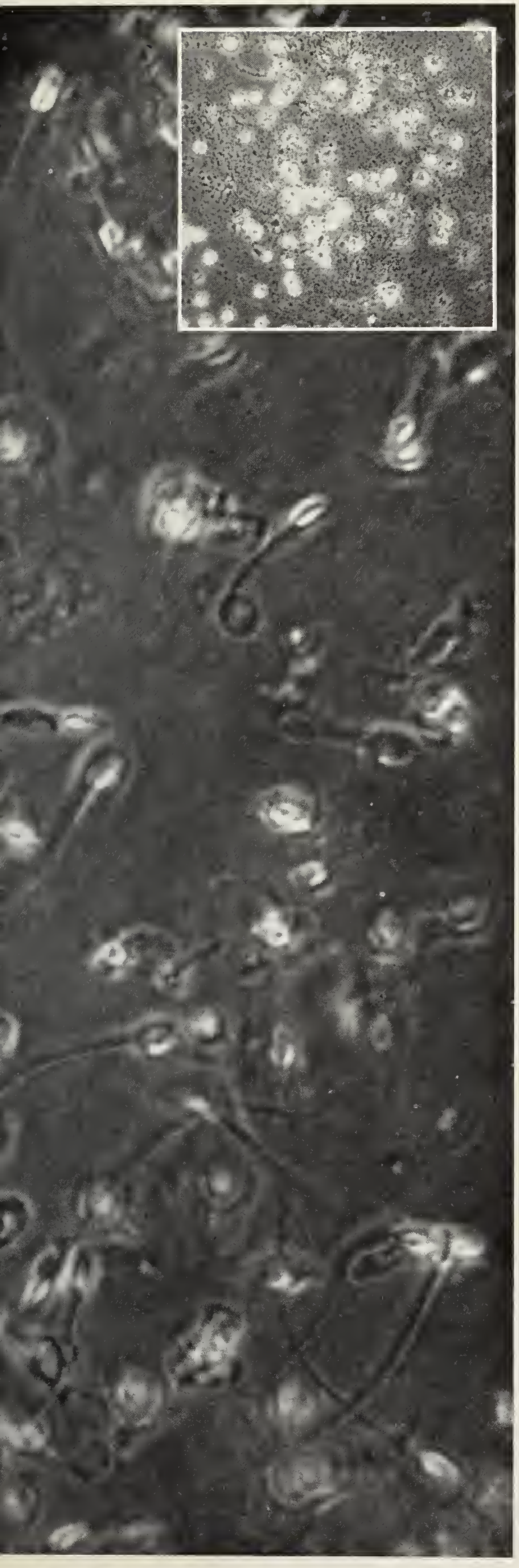


New view of an oral contraceptive at work

Although suppression of ovulation remains the primary mode of action of oral contraceptives, newer knowledge indicates that products like Norinyl-1 — a combination of both low-dosage progestogen and estrogen for the full treatment cycle — may provide multiple action that helps explain their unexcelled record of contraceptive effectiveness. This report explores the possible secondary protective mechanisms offered by combined hormonal administration.

Accumulating evidence has indicated that sparse, highly viscous cervical mucus has a possible adverse effect on the motility and survival of spermatozoa.

The estrogen-opposing progestational ingredient of Norinyl-1 (norethindrone 1 mg. with mestranol 0.05 mg.) changes the usual midcycle picture of a thin, watery cervical mucus. The result — a built-in barrier that appears to inhibit sperm from reaching the ovum should one be released. The inset in the adjoining photograph shows immobile spermatozoa as they appear in cervical mucus taken from a patient treated with Norinyl-1.

See last page for contraindications, precautions, side effects and dosage.

How the estrogen-opposing action of Norinyl-1 creates cervical mucus that may be hostile to sperm penetration

Normally, estrogen activity during the fertile midcycle stimulates the production of a profuse and watery cervical mucus that permits maximum sperm motility and promotes penetration.

But what happens when Norinyl-1 is administered? Its potent progestogen, norethindrone, opposes estrogen stimulation of cervical mucus. Consequently, the amount of mucus decreases and its viscosity increases. This results in a sparse but thick mucus barrier that appears to diminish the vitality of the sperm and to impair its powers of penetration.

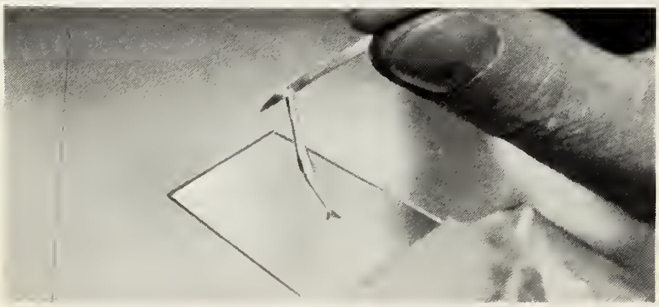
The role of viscous cervical mucus as a secondary action of Norinyl-1

In a report on 89 patients taking this medication,* cervical mucus obtained from cycle day 5 to cycle day 29 appeared scant and thick and exhibited little or no Spinnbarkeit.

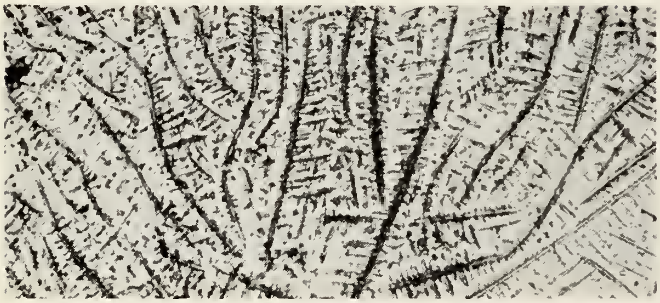
In the opinion of this investigator, the effect on cervical mucus may be sufficient to prevent conception.

*Cohen, M. R.: Symposium: Mechanisms of Action of Low Dosage Oral Contraceptive, Yale University Medical Center, New Haven, Conn., April 6, 1967.

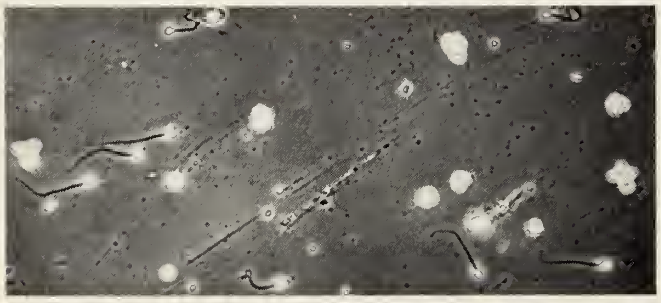
Normal cervical mucus at midcycle in untreated patient is known to permit sperm motility... promote sperm penetration.



Cervical mucus is thin and watery with a stretchability (Spinnbarkeit) of 15 to 20 cm.

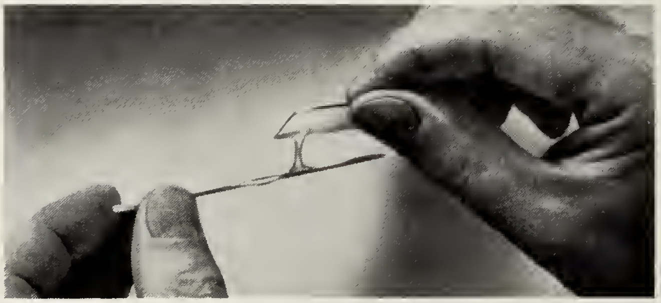


Thin, watery mucus crystallizes into this well-defined, fernlike pattern within a minute.

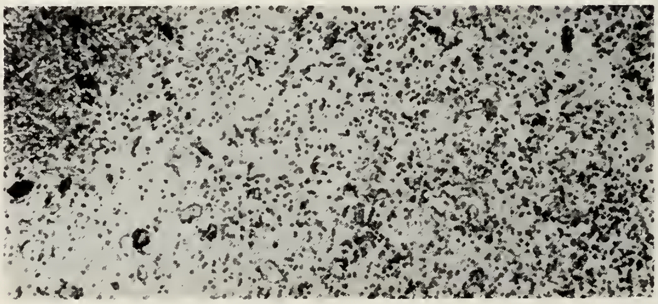


Spermatozoa appear healthy, are active and freemoving.

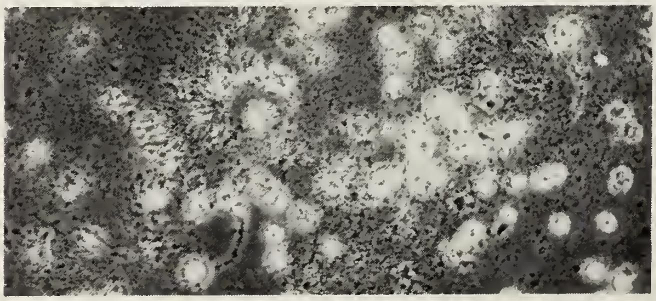
Viscous cervical mucus at midcycle produced by Norinyl-1 appears to impair sperm vitality... inhibit penetration.



Cervical mucus is scanty, thick and viscous. Spinnbarkeit is 1 cm. or less.



In thick, viscous cervical mucus the fern pattern is poorly defined or absent.

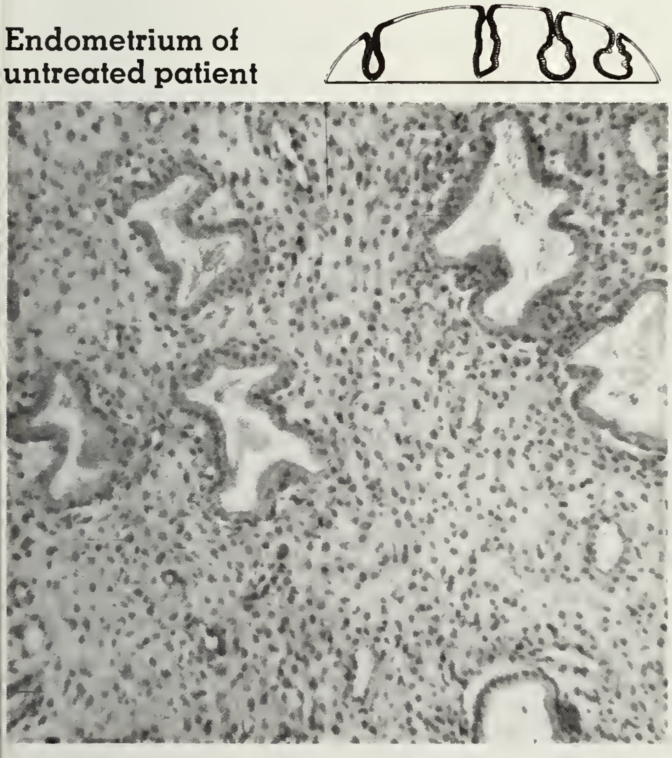


Immobile spermatozoa as they appear in cervical mucus taken from a patient treated with Norinyl-1.

How Norinyl-1 alters normal endometrial responses—another possible protective mechanism

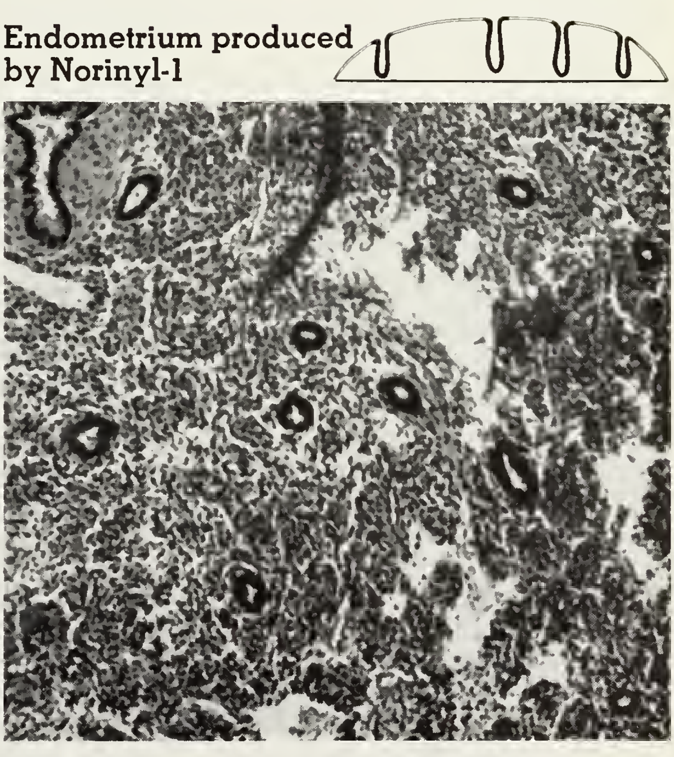
Let us suppose that an ovum is released—as occurs in an occasional, rare case—and somehow a sperm succeeds in penetrating the cervical mucus barrier. Should this come about, one additional action of Norinyl-1 may protect the patient from unwanted pregnancy. The theory is that progestogen intake makes endometrial tissue unreceptive to implantation.

Endometrium of untreated patient



Normally, the endometrium progresses through a proliferative phase stimulated by estrogen and a secretory phase stimulated by progesterone. During the secretory phase the endometrium is receptive to the fertilized ovum.

Endometrium produced by Norinyl-1



When Norinyl-1 is administered its progestogen component—norethindrone—accelerates the secretory phase and suppresses glandular and vascular development.

new
Norinyl®-1
tablets
(norethindrone 1mg. c̄ mestranol 0.05mg.)

See last page for contraindications, precautions, side effects and dosage.

effective fertility control on half the previous dosage

maintains ratio of the established norethindrone/mestranol combination

lower cost

new Norinyl®-1 tablets

(norethindrone 1mg. c̄ mestranol 0.05mg.)

Reduction of oral contraceptive dosage to lowest effective levels has become a well-accepted principle of conservative medical practice. In keeping with this view, Norinyl is now available in a new strength in which *both* norethindrone and mestranol are reduced 50 percent. Studies show that Norinyl-1 achieves fertility control with only 1.05 mg. of combined progestogen and estrogen per tablet.

Norethindrone was first reported for use as a progestational agent in human beings in 1955. Norethindrone 2 mg. with mestranol 0.1 mg., as an oral contraceptive, is currently in use by over 2,000,000 women. Clinical experience now establishes that Norinyl-1 also amply meets the criteria of reliability and safety.*

*Symposium on Low-Dosage Oral Contraception, Palo Alto, Calif., July 15, 1965.

PRESCRIBING INFORMATION

Contraindications: 1. Patients with thrombophlebitis or with a history of thrombophlebitis or pulmonary embolism. 2. Liver dysfunction or disease. 3. Patients with known or suspected carcinoma of the breast or genital organs. 4. Undiagnosed vaginal bleeding.

Warnings: 1. Discontinue medication pending examination if there is sudden partial or complete loss of vision or if there is a sudden onset of proptosis, diplopia, or migraine. If examination reveals papilledema or retinal vascular lesions, medication should be withdrawn. 2. Since the safety of Norinyl-1 in pregnancy has not been demonstrated, it is recommended that for any patient who has missed two consecutive periods, pregnancy should be ruled out before continuing the contraceptive regimen. If the patient has not adhered to the prescribed schedule, the possibility of pregnancy should be considered at the time of the first missed period. 3. Detectable amounts of the active ingredients in oral contraceptives have been identified in the milk of mothers receiving these drugs. The significance of this dose to the infant has not been determined.

Precautions: 1. The pretreatment physical examination should include special reference to breast and pelvic organs, as well as a Papanicolaou smear. 2. Endocrine and possibly liver function tests may be affected by treatment with Norinyl-1. Therefore, if such tests are abnormal in a patient taking Norinyl-1, it is recommended that they be repeated after the drug has been withdrawn for 2 months. 3. Under the influence of estrogen-progestogen preparations, preexisting uterine fibroids may increase in size. 4. Because these agents may cause some degree of fluid retention, conditions that may be influenced by this factor, such as epilepsy, migraine, asthma, cardiac, or renal dysfunction, require careful observation. 5. Although a cause and effect relationship has not been established, Norinyl-1 should be used with caution in patients with a history of cerebrovascular accident. 6. In relation to breakthrough bleeding, as in all cases of irregular bleeding *per vaginam*, nonfunctional causes should be borne in mind. In cases of undiagnosed vaginal bleeding, adequate diagnostic measures are indicated. 7. Patients with a history of psychic depression should be carefully observed and the drug discontinued if the depression recurs to a serious degree. 8. Any possible influence of prolonged Norinyl-1 therapy on pituitary, ovarian, adrenal, hepatic or uterine function awaits further study. 9. A decrease in glucose tolerance has been observed in a small percentage of patients on oral contraceptives. The mechanism of this decrease is obscure. For this reason, diabetic patients should be carefully observed while receiving Norinyl-1 therapy. 10. Because of the occasional occurrence of thrombophlebitis and pulmonary embolism in patients taking oral contraceptives, the physician should be alert to the earliest manifestations of the disease. A cause and effect relationship has not been demonstrated. 11. Because of the effects of estrogens on epiphyseal closure, Norinyl-1 should be used judiciously in young patients in whom bone growth is not complete. 12. The age of the patient constitutes no absolute limiting factor, although treatment with Norinyl-1 may mask the onset of the climacteric. 13. The pathologist should be advised of Norinyl-1 therapy when relevant specimens are submitted.

Side Effects: The following adverse reactions have been observed with varying incidence in patients receiving oral contraceptives: nausea, vomiting, gastrointestinal symptoms, breakthrough bleeding, spotting, change in menstrual flow, amenorrhea, edema, chloasma, breast changes (tenderness, enlargement and secretion), loss of scalp hair, change in weight (increase or decrease), changes in cervical erosion and cervical secretions, suppression of lactation when given immediately postpartum, cholestatic jaundice, erythema multiforme, erythema nodosum, hemorrhagic eruption, migraine, rash (allergic), itching, rise in blood pressure in susceptible individuals, mental depression.

The following occurrences have been observed in users of oral contraceptives. A cause and effect relationship has not been established: thrombophlebitis, pulmonary embolism, neuroocular lesions.

The following laboratory results may be altered by the use of oral contraceptives: increased bromsulphalein retention and other hepatic function tests, coagulation tests (increase in prothrombin, factors VII, VIII, IX and X), thyroid function (increase in PBI and butanol extractable protein-bound iodine and decrease in T^3 values), metapyrone test, pregnanediol determination.

Other side effects reported to have occurred in association with use of this drug are dizziness, hirsutism, pains in legs, back, chest and abdomen, dysuria, drowsiness, vaginal discharge, libido increased and decreased, eruptions, hypermenorrhea, hypomenorrhea, increased appetite, G.U. infections, varicose veins, abdominal fullness, acne, headache, nervousness, allergies, blurred vision, pain in eyes, and itching in eyes. *For complete clinical data, see package insert.*

Dosage and Administration: 1. One tablet of Norinyl-1 is administered orally for 20 days beginning on day 5 of the menstrual cycle. (Count day 1 of the cycle as the first day of menstrual bleeding.) Repeat this dosage schedule for each cycle. 2. If no menstrual period occurs after a cycle of treatment (20 tablets) in which patient adhered to the schedule, the patient must be instructed to resume taking the Norinyl-1 tablets 7 days after the previous 20-day course was completed. For example, if the last pill of a previous cycle had been taken on a Sunday, then a new cycle of treatment should begin on the following Sunday. 3. In the postpartum woman, it is recommended that the first cycle of treatment should begin on day 5 of the first menstrual cycle. However, Norinyl-1 should not be administered during lactation.

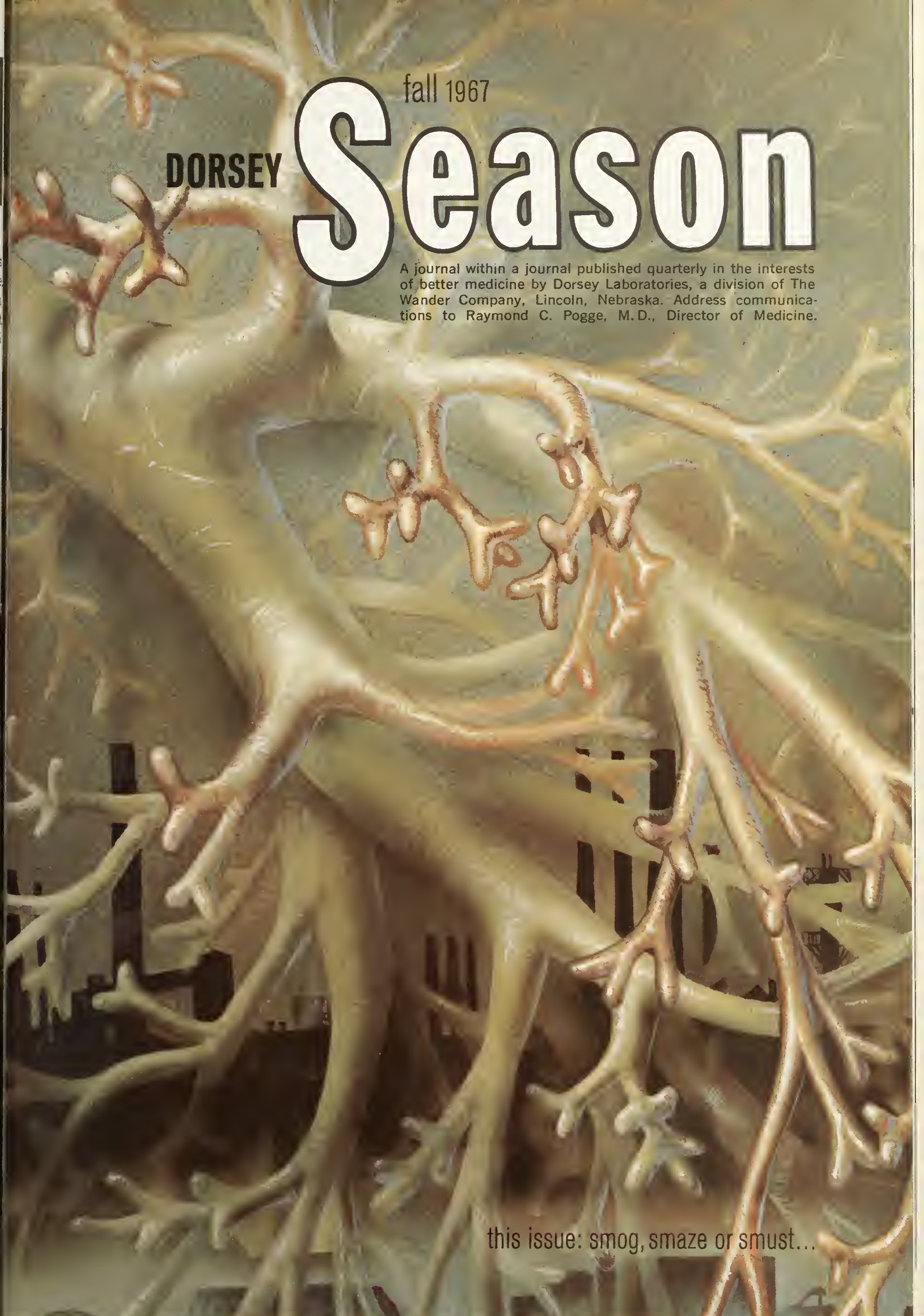
Availability: Norinyl-1 (norethindrone 1 mg. with mestranol 0.05 mg.)—Dispensers of 20 and 60 and bottles of 250 tablets.

norethindrone — an original steroid from
SYNTEX
LABORATORIES INC., PALO ALTO, CALIF.

fall 1967

DORSEY Season

A journal within a journal published quarterly in the interests of better medicine by Dorsey Laboratories, a division of The Wander Company, Lincoln, Nebraska. Address communications to Raymond C. Pogge, M.D., Director of Medicine.



this issue: smog, smaze or smust...

Smog, smaze or smust...effects of air pollution on upper respiratory tract

Nathan Flaxman, M.D., Diplomate, American Board of Internal Medicine, Chicago, Illinois

In Los Angeles it is *smog* (smoke and fog). In New York City *smaze* (smoke and haze). In El Paso *smust* (smoke and dust). The original factor was smoke plus such natural phenomena as fog, haze and dust, but air pollution has mushroomed from a smoke problem in our industrial cities into a major economic, esthetic and public health problem that affects practically every American locality and citizen.[1,2] Respiratory disease, of course, is by far the most costly effect of air pollution, for contaminated air can aggravate our illnesses, deplete our strength and shorten our life span.[1]

The greatest problem in dealing with solid wastes is that they are not quickly returned to dust. To aid the decomposing process, the great bulk of such waste is burned, polluting our air in the process.[3] Dr. Jack McKee of the California Institute of Technology[4] has calculated that in Los Angeles County, which has more than six million people, about three pounds of gaseous wastes per person per day (on a dry-weight basis) enter the atmosphere. This is twice as much as solid refuse disposal and six times as much as the contaminants in waste water. It is estimated that in New York City, 730 pounds of pollutants, a little over half the size of a compact two-door sedan of foreign make, is annually thrown into the air for each man, woman and child in the city.[5]

Air pollution is an evident factor, not only in the common cold and upper respiratory disease, but also in chronic bronchitis,[2] pulmonary emphysema,[6] bronchial asthma,[7] pneumonitis and lung cancer.[8] Its effect on the incidence of pulmonary tuberculosis is unproved,[9] although it is conceivable that the presence of various materials polluting the air might do this. A siege of smog in Denver, the "mile high city," in December 1965 was accompanied by respiratory infection that doubled normal absentee rates in schools, factories and city government.[10]

While air pollution is only one factor, it has become important in the causes of most of the afflictions of the respiratory tract. This has been shown not only by the Denver occurrence, but also by detailed study[2] of respiratory illness in a small group of 313 men

from October 1962 to May 1963 when there were 202 episodes involving the upper respiratory tract. The attack rate of illness was related in time to increased concentration of both smoke and sulphur dioxide in the atmosphere of the district in which the men lived.

Other factors often mentioned, include exposure to those who have colds, exposure to extreme changes of temperature, allergy and bacterial infection. However, when low individual resistance due to lack of rest, overwork, fatigue, improper or unbalanced diet, previous illness and emotional stress are included as causes, we enter the realm of somewhat obscure relationships. Much more emphasis can be placed on the role of polluted air.

The symptoms, signs and complications of involvement of the upper respiratory tract, especially the common cold, are the same regardless of the causative factor. Swelling of the lining of the nose, the scratchy dry throat, the discharge from the nose at first watery then thicker, discolored and more tenacious, the eyes tearing, and frequent sneezing are all part of the Number 1 human ailment. Concurrent or residual sinusitis when mucus is trapped there, middle ear involvement due to interference with drainage, laryngitis and bronchitis are complications of the common cold. The primary interference is with a most important function of the nose—the cleansing of foreign matter in the first line of "air defense" to prevent it from entering the breathing tract.

However, the diagnosis and subsequent decision on how to treat the patient so affected rests basically on the relief of symptoms that cause him the misery. The stuffed, runny nose, the clogged ears, and the harsh dry cough—all the symptoms that make common cold sufferers feel miserable and interfere with their sleep—can be alleviated with medications of the oral nasal decongestant/antihistamine combination type. The burning sensation in the throat, soreness of the chest and even chest pain can also be relieved by such medication. Rest in bed if there is fever (but confined to home at least), liberal fluids, uniformly warm surroundings and adequate humidity in the room, are all helpful adjuncts to the medication. Most common cold sufferers recover rapidly and are symptom-free in four to ten days.

For nature's hazards:
nasal congestion
due to seasonal
allergies and
summer colds

Triaminic® *syrup*

Each teaspoonful (5 ml.) contains:

Phenylpropanolamine hydrochloride	12.5 mg.
Pheniramine maleate	6.25 mg.
Pyrilamine maleate	6.25 mg.

For nasal congestion regardless of cause, you can bring quick, lasting comfort to your little patients with Triaminic Syrup. You may occasionally encounter these side effects: drowsiness, blurred vision, cardiac palpitations, flushing, dizziness, nervousness or gastrointestinal upsets. Precautions: the possibility of drowsiness should be considered by patients engaged in mechanical operations requiring alertness. Use with caution in patients with hypertension, heart disease, diabetes, or thyrotoxicosis.

(Advertisement)

Further treatment, altered by the fact that the affliction hangs on for more than the usual duration of the common cold, requires consideration of allergy, which is most frequently the prolonging factor. But air pollution itself may often be the culprit.

(Concluded on following page)

At the Third National Conference on Air Pollution held recently, it was emphasized that this subject had received more attention in the past four years than in all previous history. Spicer,[11] an active participant at this conference, reiterated that it behooves the practicing physician to be aware of trends in respiratory disease and to accept a major role in community action relating to air pollution and respiratory health. By taking a positive stand physicians have been instrumental in the development of antipollution legislation. An outstanding example is Los Angeles where major steps have been taken by abolishing coal burning, and even banishing oil burning, seven months a year. Natural gas must be used instead and it must be used by industry when available. Backyard incinerators have been abolished in favor of landfill disposal, and building incineration ended except for a few expensive smokeless furnaces.[10] Concerted action can be taken against particular industrial nuisances. One company that disregarded complaints discovered its error when thousands of its credit cards were returned by irate customers who decided to patronize competing companies.[12]

Summary. Respiratory disease is the most important and most costly effect of air pollution, whether termed smog, smaze, or smust. Air pollution is an economic, esthetic and public health problem that affects practically every American locality and citizen. New sources of air pollution are invisible and odorless, but the harmful gases and liquid droplets are there. Triggered by sunlight, some of these undergo mid-air chemical changes and the results are even more irritating to the upper respiratory tract. The symptoms, signs and complications, especially of the upper respiratory tract, can be readily aborted by modern medication but may be unduly prolonged by polluted air. In steps taken to prevent this, the practicing physician can take a major role.

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How can he be a sport with a runny nose?

For summer allergies, summer colds, or nasal congestion due to almost any cause, you prescribe quick r-e-l-i-e-f with Triaminic. It's ideal for summer allergies:

1. Acts in 15-30 minutes due to decongestant.
2. Follows up with balanced dual antihistamines.
3. Up to 24-hour 'round the clock relief when dosed one tablet at morning, midafternoon and evening.

Summer time is sport time and who can be a sport with a runny nose?

provide patient comfort

Triaminic® relieves summer allergies

Each timed-release tablet contains:

Phenylpropanolamine hydrochloride	50 mg.
Pheniramine maleate	25 mg.
Pyrilamine maleate	25 mg.

Side effects: Occasional drowsiness, blurred vision, cardiac palpitation, flushing, dizziness, nervousness or gastrointestinal upsets.

Precautions: The patient should be advised not to drive a car or operate dangerous machinery if drowsiness occurs. Use with caution in patients with hypertension, heart disease, diabetes or thyrotoxicosis.

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Night Leg Cramps . . . Unwelcome Bedfellow

In Diabetes,[1] Arthritis,[2] and Peripheral Vascular Disorders[2]

now . . . specific therapy for night leg cramps

Walker

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Consistently effective, QUINAMM provided complete relief in 94% of 200 patients studied, many of whom were severe cases refractory to other medication.[3] Your prescription for one tablet at bedtime often controls painful night cramps with the initial dose . . . helps restore restful sleep.

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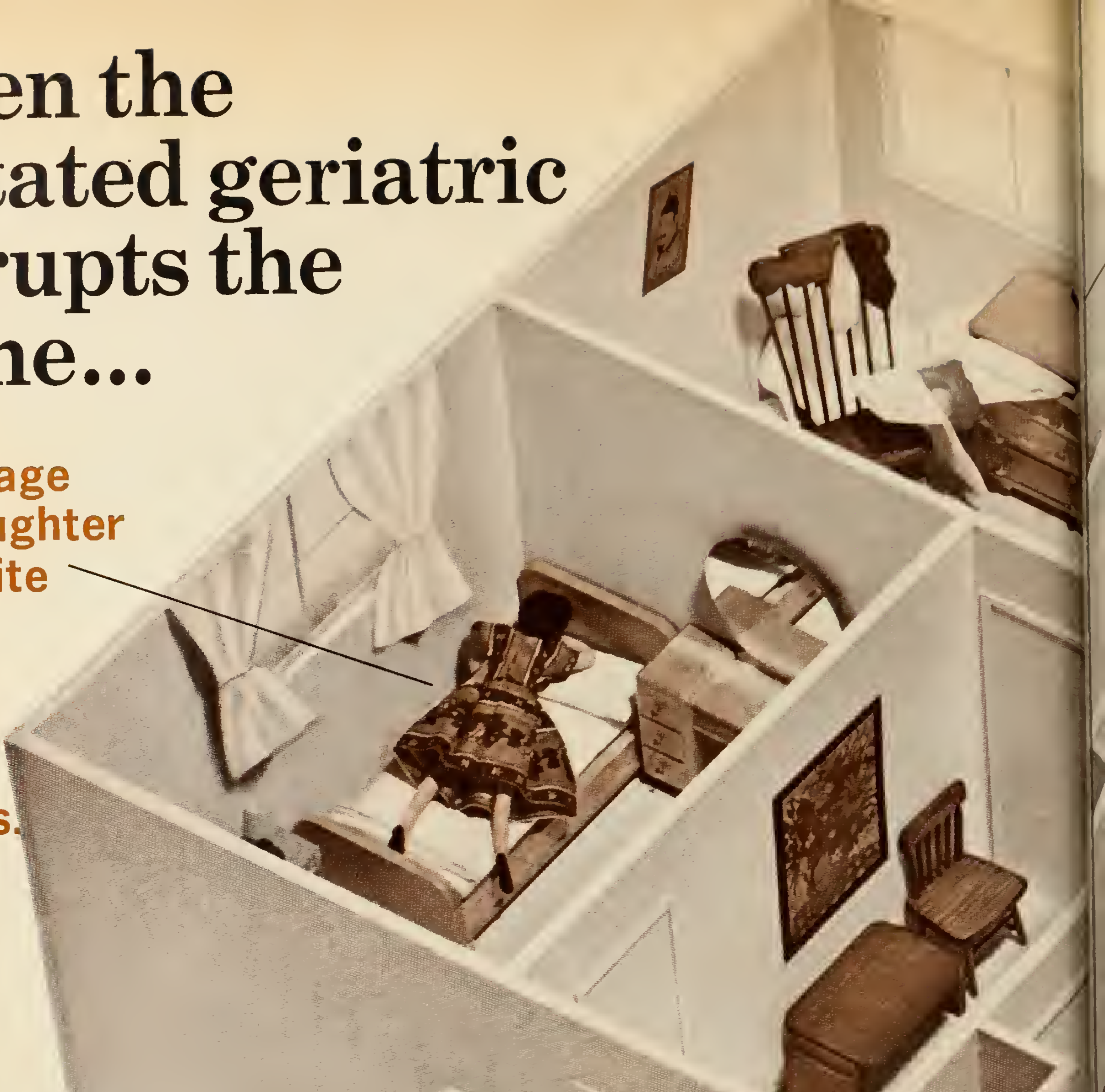
Prescribing Information: Composition: Each white, beveled, compressed tablet contains: Quinine Sulfate 260 mg. and Aminophylline 195 mg. **Contraindication:** QUINAMM is contraindicated in pregnancy because of its quinine content. **Precautions:** Aminophylline may produce intestinal cramps in some instances, and quinine may produce symptoms of cinchonism, such as tinnitus, dizziness, and gastrointestinal disturbance. Discontinue use if ringing in the ears, deafness, skin rash, or visual disturbances occur. **Dosage:** One tablet upon retiring. Where necessary, dosage may be increased to one tablet following the evening meal and one tablet upon retiring. **Supplied:** Bottles of 100 and 500 tablets. **References:** 1. Shuman, C.: Am. J. Med. Sci., 225:54, 1953. 2. Perchuk, E., et al.: Angiology, 12:102, 1961. 3. Rawls, W., et al.: Med. Times, 87:818, 1959. 6/67 Q-706A

When the agitated geriatric disrupts the home...

His teen-age granddaughter won't invite friends home because of his outbursts.



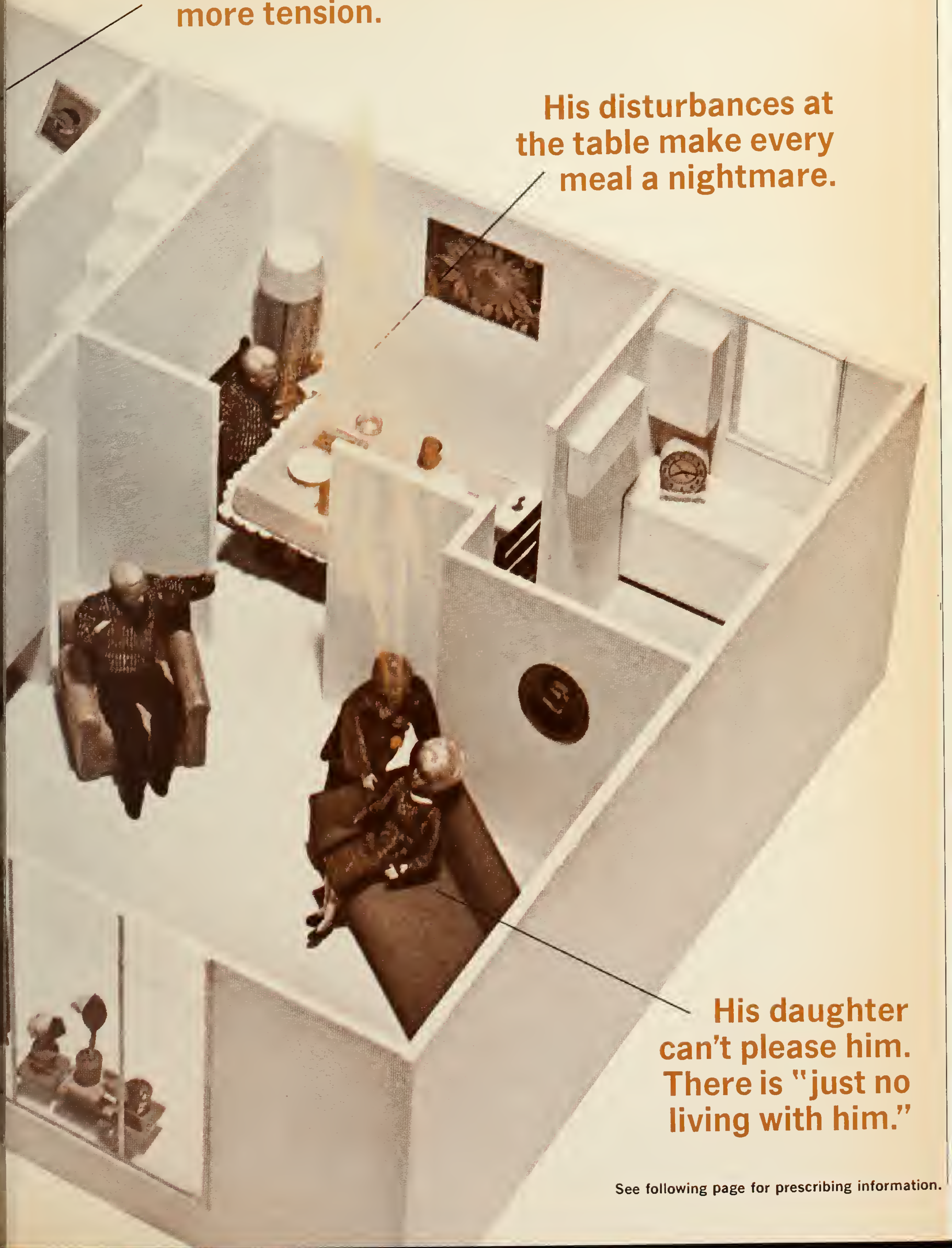
for moderate to severe anxiety

Mellaril®

(thioridazine)

25 mg. t.i.d.

SANDOZ



His slovenly room and habits create more tension.

His disturbances at the table make every meal a nightmare.

His daughter can't please him. There is "just no living with him."

See following page for prescribing information.

When the agitated geriatric disrupts the home...

Anxiety that *seriously interferes* with the individual's performance at work, at home, or in the community may be regarded as *moderate to severe* in degree.

Mellaril often recommends itself to the treatment of moderate to severe anxiety because it

- helps control the most frequent symptoms: marked tension, agitation, apprehension, restlessness, hypermotility
- often alleviates anxiety-induced somatic complaints
- frequently helps strengthen emotional resources
- helps the patient maintain realistic contact with environment, closer harmony with family

Thus, when you consider the anxiety moderate to severe... consider Mellaril.

Contraindications: Severely depressed or comatose states from any cause, and in association with or following MAO inhibitors; severe hypertensive or hypotensive heart disease.

Precautions: Hypersensitivity reactions (e.g., leukopenia, agranulocytosis) and convulsive seizures are infrequent. Pigmentary retinopathy has been observed where doses in excess of those recommended were used for long periods of time. May potentiate central nervous system depressants, atropine, and phosphorus insecticides. Where complete mental alertness is required, administer the drug cautiously and increase dosage gradually. In addition, orthostatic hypotension (especially in female patients) has been observed. Epinephrine should be avoided in treatment of drug-induced hypotension.

Side Effects: Pseudoparkinsonism and other extrapyramidal disorders are infrequent; drowsiness, especially in high doses early in treatment, may occur; nocturnal confusion, dryness of the mouth, nasal stuffiness, headache, peripheral edema, lactation, galactorrhea, and inhibition of ejaculation are noted on occasion; photosensitivity and other allergic skin reactions may occur but are extremely rare.

Before prescribing, see package insert for full product information.

for moderate to severe anxiety

Mellaril®
(thioridazine)
25 mg. t.i.d.

SANDOZ

mudrane®

for

- EMPHYSEMA
- ASTHMA
- CHRONIC BRONCHITIS
- BRONCHIECTASIS

The fast-disintegrating uncoated tablet gives relief in 15 minutes

Each tablet contains:

Potassium Iodide	195 mg.
Aminophylline	130 mg.
Phenobarbital, Caution: May be habit forming	21 mg.
Ephedrine HCl	16 mg.

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DISPENSING WITHOUT PRESCRIPTION

Precautions: Usual for aminophylline-ephedrine-phenobarbital. Iodides may cause nausea, long use may cause goiter. Discontinue if symptoms of iodism develop.

Iodide contraindications: tuberculosis, pregnancy.

DOSAGE

One tablet, with full glass of water, 3 or 4 times daily.

Dispensed in bottles of 100 and 1000 tablets.

MUDRANE GG—Formula, dosage and package identical to Mudrane—*except*—100 mg. glyceryl guaiacolate replaces the potassium iodide. The value of Mudrane cannot be enjoyed by a small group in which K.I. is contraindicated. Mudrane GG is prepared for this group.

MUDRANE GG ELIXIR—Four 5 cc teaspoonfuls is equivalent to one Mudrane GG tablet. Dosage adjusted to age and weight of child. Mudrane GG Elixir is for pediatric patients and those who think they cannot swallow tablets. Dispensed in pint and half gallon bottles.

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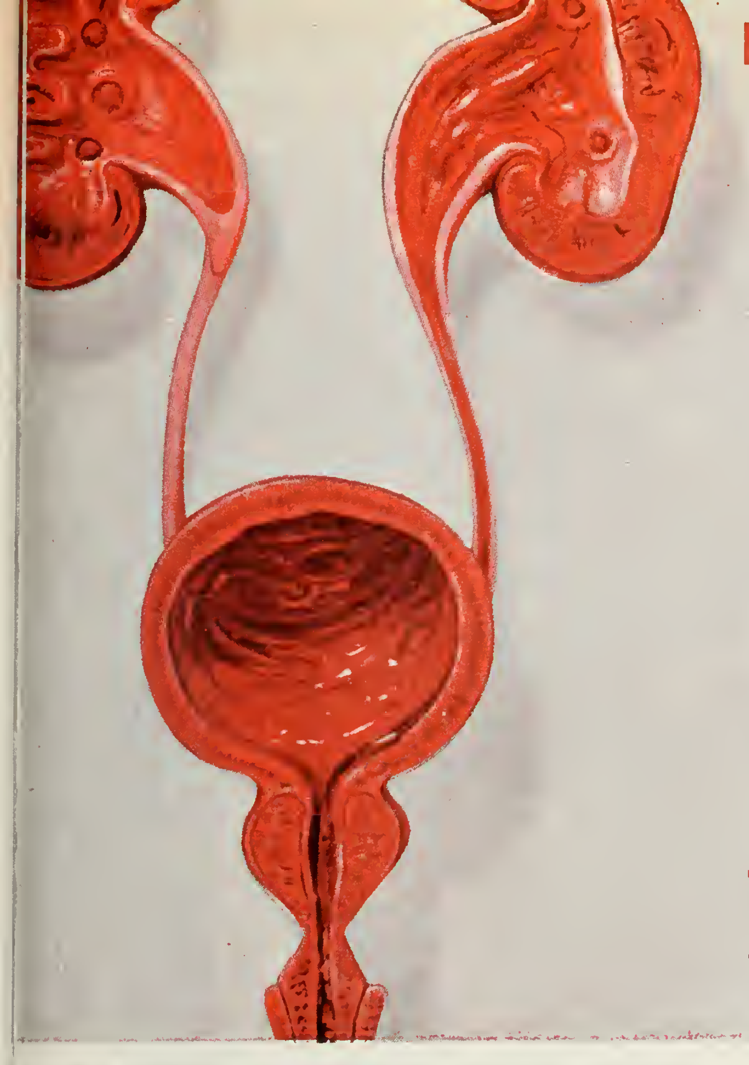

Diagnosis:

cystitis?
pyelonephritis?
pyelitis?
urethritis?
prostatitis?

in any case,
usually gram-negative*

Therapy:

two 500 mg. Caplets® q.i.d.
(initial adult dose)

Indications: Urinary tract infections caused by gram-negative and some gram-positive organisms.

Side effects: Mainly mild, transient gastrointestinal disturbances; in occasional instances, drowsiness, fatigue, pruritus, rash, urticaria, mild eosinophilia, reversible subjective visual disturbances (overbrightness of lights, change in visual color perception, difficulty in focusing, decrease in visual acuity and double vision), and reversible photosensitivity reactions. Marked overdosage, coupled with certain predisposing factors, has produced brief convulsions in a few patients.

Precautions: As with all new drugs, blood and liver function tests are advisable during prolonged treatment. **Pending further experience, like most chemotherapeutic agents, this drug should not be given in the first trimester of pregnancy. It must be used cautiously in patients with liver disease or severe impairment of kidney function.** Because photosensitivity reactions have occurred in a small number of cases, patients should be cautioned to avoid unnecessary exposure to direct sunlight while receiving NegGram, and if a reaction occurs, therapy should be discontinued. The dosage recommended for adults and children should not arbitrarily be doubled unless under the careful supervision of a physician. Bacterial resistance may develop.

When testing the urine for glucose in patients receiving NegGram, Clinistix® Reagent Strips or Tes-Tape® should be used since other reagents give a false-positive reaction.

Dosage: Adults: Four Gm. daily by mouth (2 Caplets® of 500 mg. four times daily) for one to two weeks. Thereafter, if prolonged treatment is indicated, the dosage may be reduced to two Gm. daily. Children may be given approximately *25 mg. per pound* of body weight per day, administered in divided doses. The dosage recommended above for adults and children should not arbitrarily be doubled unless under the careful supervision of a physician. Until further experience is gained, infants under 1 month should not be treated with the drug.

How supplied: Buff-colored, scored Caplets® of **500 mg. for adults,** conveniently available in bottles of 56 (sufficient for one full week of therapy) and in bottles of 1000. **250 mg. for children,** available in bottles of 56 and 1000.

References: (1) Based on 23 clinical papers, 1512 cases. Bibliography on request. (2) Bush, I. M., Orkin, L. A., and Winter, J. W., in Sylvester, J. C.: Antimicrobial Agents and Chemotherapy—1964, Ann Arbor, American Society for Microbiology, 1965, p. 722.

Winthrop

Winthrop Laboratories, New York, N. Y. 10016

NegGram®

Brand of

nalidixic acid

a specific anti-gram-negative

eradicates most urinary tract infections...

- Low incidence of untoward effects; no fungal overgrowth, crystalluria, ototoxic or nephrotoxic effects have been observed.
- "Excellent" or "good" response reported *in more than 2 out of 3* patients with either chronic or acute gram-negative infections.[1]

*As many as 9 out of 10 urinary tract infections are now caused by gram-negative organisms: E. coli, Klebsiella, Aerobacter, Proteus, Paracolon or Pseudomonas[2]... However, infections of the urethra and prostate caused by non-gonococcal gram-negative organisms are believed to be less prevalent.

"George wants to know if it's okay to take his cold medicine now, Doctor, instead of seven o'clock?"

The long-continued action of Novahistine LP should help you both get a good night's sleep. Two tablets in the morning and two in the evening will usually provide round-the-clock relief by helping clear congested air passages for freer breathing. Novahistine LP also helps restore normal mucus secretion and ciliary activity—normal physiologic defenses against infection of the respiratory tract. Use cautiously in individuals with severe hypertension, diabetes mellitus, hyperthyroidism or urinary retention. Caution ambulatory patients that drowsiness may result. Each Novahistine LP tablet contains: phenylephrine hydrochloride, 25 mg., and chlorpheniramine maleate, 4 mg.

NOVAHISTINE® LP

DOW **PITMAN-MOORE** Division of The Dow Chemical Company, Indianapolis

"COCA-COLA" AND "COKE" ARE REGISTERED TRADE-MARKS WHICH IDENTIFY ONLY THE PRODUCT OF THE COCA-COLA COMPANY
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Coca-Cola
For the taste you never get tired of.

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A Building Block approach to treating hypertension

ABBOTT

With these three therapeutic building blocks you can create a once-a-day regimen to fit almost any degree of hypertension. See the following pages for details . . .

Consider starting your hypertensives on this basic thiazide

ABBOTT

A single daily dose of Enduron provides sodium excretion around the clock

Enduron is a true 24-hour single-dose thiazide. Its sodium excretion is not squeezed into an abrupt peak during the first several hours. It is well-sustained in a plateau-like effect—with little reduction for the first 12 hours, and decline thereafter only gradual.

Potassium loss, by contrast, is low. It reaches an early minor peak, then subsides rapidly. Moreover, since dosage is but once a day, there is but one daily peak of potassium loss. As with all thiazides, however, dietary potassium supplementation should also be considered, especially in long or intensive therapy.

Use Enduron as an ideal starting therapy in mild hypertension. Use it too, as a basic therapeutic building block with which other agents can be joined, for managing your more resistant hypertensives.

Once a day, every day

ENDURON®
METHYCLOTHIAZIDE

	Minimum	Usual	Intermediate	Maximum
DAILY DOSAGE RANGE	 2.5 mg. tablet	 5 mg. tablet	 7.5 mg.	 10 mg.

See Brief Summary on final page of advertisement.

To build added response, shift to Enduronyl

ABBOTT

The deserpidine component adds enhanced antihypertensive activity

The rauwolfia component of Enduronyl is deserpidine (Harmonyl®), a purified crystalline alkaloid supplied only by Abbott. It augments Enduron with its own antihypertensive and tranquilizing action.

Thus the combined clinical effect of these two therapeutic building blocks in Enduronyl is greater than can ordinarily be achieved with either alone.

To add flexibility, Enduronyl comes in two strengths: regular and Forte. Both provide 5 mg. of Enduron. The variation is where most helpful: in the deserpidine. The tablets are scored, and give a surprisingly wide and economical choice of once-a-day doses (see below).

Choose Enduronyl for your patients in the broad range of mild to moderate hypertension. Patient acceptance is excellent!

Once a day, every day

ENDURONYL®

METHYCLOTHIAZIDE 5 MG. WITH DESERPIDINE 0.25 MG.

ENDURONYL FORTE

METHYCLOTHIAZIDE 5 MG. WITH DESERPIDINE 0.5 MG.

	Minimum	Usual	Intermediate	Maximum
DAILY DOSAGE RANGE	 2.5 mg. methyclothiazide 0.125 mg. deserpidine	 5 mg. methyclothiazide 0.25 mg. deserpidine	 7.5 mg. methyclothiazide 0.375 mg. deserpidine	 10 mg. methyclothiazide 0.5 mg. deserpidine
DAILY DOSAGE RANGE	 2.5 mg. methyclothiazide 0.25 mg. deserpidine	 5 mg. methyclothiazide 0.5 mg. deserpidine	 7.5 mg. methyclothiazide 0.75 mg. deserpidine	 10 mg. methyclothiazide 1 mg. deserpidine

See Brief Summary on final page of advertisement.

707075-R

Eutonyl affords a different kind of basic therapy for moderate to severe cases

ABBOTT

Effect tied to reduced peripheral vascular resistance; no central depressant action

Eutonyl is a unique nonhydrazine agent. It is reported to act by reducing peripheral vascular resistance.[1,2]

In clinical trials, significant reductions in mean blood pressure were seen in 84% of patients studied—all were moderate to severe cases. Eutonyl lowers diastolic in proportion to systolic, and in about half of the cases studied, reductions in the sitting and recumbent positions were nearly as great as in the standing position.

Most important: There is no central depressant action. In fact, some patients reported an *increased* sense of well being.

Here, then, is a highly effective *basic treatment* for moderate to severe cases—and one that will not hamper your patient with lethargy or drowsiness while on treatment.

Once a day, every day

EUTONYL®
PARGYLINE HYDROCHLORIDE

DAILY DOSAGE RANGE	Minimum	Usual starting	Intermediate	Maximum
	 10 mg. tablet	 25 mg. tablet	 50 mg. tablet or as needed	 200 mg.

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1. *Brest, A. N., et al., Cardiac and Renal Hemodynamic Response to Pargyline, Ann. N. Y. Acad. Sci., 107-1016, 1963.*
2. *Winsor, T., Pargyline Hydrochloride, Hypertension, Urinary Tryptamine, and Vascular Reflexes, Geriatrics, 19:598, Aug., 1964.*

See Brief Summary on final page of advertisement.

Eutron adds thiazide for enhanced therapy with milder side effects

ABBOTT

Only a 7/4 mm. span between standing and recumbent pressures in clinical trials—reduced chance of orthostatic hypotension

The combining of Eutonyl and Enduron in Eutron permits a significantly greater antihypertensive effect than with either agent used alone. This in turn may allow therapeutic success with lesser dosage—and correspondingly milder side effects.

A significant finding in clinical trials was the drug's action in lowering blood pressure to *nearly equal levels in all body positions*. Total average spread between standing and recumbent readings (after treatment) was only 7/4 mm. Hg.

Thus, in your moderate to severe cases, Eutron affords a usually smooth course of therapy, often with reduced likelihood of orthostatic effects. (The usual precautions against rising suddenly, of course, will always apply.) And, because of the thiazide component, Eutron may be used in the presence of congestive heart failure.

Once a day, every day

EUTRON™

PARGYLINE HYDROCHLORIDE 25 MG.
WITH METHYCLOTHIAZIDE 5 MG.

	Minimum	Usual starting	Intermediate	Maximum
DAILY DOSAGE RANGE				
	12.5 mg. pargyline hydrochloride and 2.5 mg. methyclothiazide	25 mg. pargyline hydrochloride and 5 mg. methyclothiazide	37.5 mg. pargyline hydrochloride and 7.5 mg. methyclothiazide	50 mg. pargyline hydrochloride and 10 mg. methyclothiazide

See Brief Summary on final page of advertisement.

TM—Trademark

707075-R

ENDURON | ENDURONYL

METHYCLOTHIAZIDE

Each tablet contains
Methyclothiazide 5 mg. with
Deserpidine 0.25 mg. or 0.5 mg.

Indications: Enduron is used to control edema and mild to moderate hypertension; also used with other drugs for hypertension. Enduronyl is used in mild to moderately severe hypertension; when used with Enduronyl, more potent agents can be given at reduced dosage to minimize undesirable side effects.

Contraindications: Neither Enduron nor Enduronyl should be used in severe renal disease (except nephrosis) or shutdown; in severe hepatic disease or impending hepatic coma; in patients sensitive to thiazides. Hepatic coma has been reported as a result of hypokalemia in patients receiving thiazides.

Enduronyl is contraindicated in patients with severe mental depression and suicidal tendencies, active peptic ulcer, or ulcerative colitis.

Warnings: Consider possible sensitivity reactions in patients with a history of allergy or asthma. If added potassium intake is indicated, dietary supplementation is recommended. Enteric-coated potassium tablets should be reserved for cautious use only when adequate dietary supplementation is not practical because those tablets may induce serious or fatal small bowel lesions consisting of stenosis with or without ulceration. These small bowel lesions have caused obstruction, hemorrhage and perforation frequently requiring surgery. Medication should be discontinued immediately if abdominal pain, distension, nausea, vomiting or GI bleeding occurs.

Precautions: Use thiazides with caution in severe renal dysfunction, impaired hepatic function, or progressive liver disease. In surgical patients, thiazides may reduce the response to vasopressors and increase the response to tubocurarine. Use thiazides with caution in pregnancy (bone marrow depression, thrombocytopenia, or altered carbohydrate metabolism have been reported in certain newborn infants). Also reported have been: blood dyscrasias including thrombocytopenia with purpura, agranulocytosis and aplastic anemia; elevations of BUN, serum uric acid, or blood sugar. Symptomatic gout may be induced. Antihypertensive response may be enhanced following sympathectomy.

Use Enduronyl with caution in patients with a history of peptic ulcer, as rauwolfias may increase gastric secretion. Discontinue at the first sign of mental depression. Rauwolfia alkaloids may increase hypotensive effects of surgery or anesthesia, and should be discontinued two weeks prior. They also lower the convulsive threshold and shorten seizure latency. In epilepsy, dosage adjustment of anticonvulsant medication may be necessary. Alcohol, barbiturates, or narcotics may potentiate action of deserpidine.

Adverse Reactions: During intensive or prolonged therapy, guard against hypochloremic alkalosis and hypokalemia (especially the latter if patient is on digitalis). All patients should be observed for signs of hyponatremia ("low-salt" syndrome). Reported thiazide reactions include: anorexia, nausea, vomiting, diarrhea, headache, skin rash, dizziness, paresthesia, weakness, photosensitivity, jaundice, and pancreatitis.

Reported rauwolfia reactions include: nasal stuffiness, nausea, weight gain, diarrhea, aggravation of peptic ulcer, epistaxis, skin eruption, and reduction of libido and potency. Excessive drowsiness, fatigue, weakness, and nightmares may signal early signs of mental depression.

EUTONYL | EUTRON™

PARGYLINE HYDROCHLORIDE

Each tablet contains
Pargyline Hydrochloride 25 mg.
with Methyclothiazide 5 mg.

Indications: For treatment of patients with moderate to severe hypertension, especially those with severe diastolic hypertension. Not recommended for patients with mild or labile hypertension amenable to therapy with sedatives and/or thiazide diuretics alone. It is desirable to establish the dosage of Eutron by administering component drugs separately.

Contraindications: Pheochromocytoma, advanced renal disease, increasing renal dysfunction, paranoid schizophrenia and hyperthyroidism. Hepatic coma has been reported as consequence of hypokalemia with thiazide therapy. Until further experience is gained not recommended for patients with malignant hypertension, children under 12, or pregnant patients.

Concomitant use of the following is contraindicated: other monoamine oxidase inhibitors; parenteral forms of reserpine or guanethidine; sympathomimetic drugs; foods high in tyramine such as cheese; imipramine and amitriptyline, or similar antidepressants; methyldopa. 2 week interval should separate therapy and use of these agents.

Methyclothiazide is contraindicated in patients with known sensitivity to thiazides.

Warnings: Pargyline hydrochloride is a monoamine oxidase inhibitor. Warn patients against eating cheese, and using alcohol, proprietary drugs or other medication without the knowledge of the physician. When indicated, alcohol, narcotics (meperidine should be avoided), antihistamines, barbiturates, chloral hydrate, and other hypnotics, sedatives, tranquilizers, or caffeine, may be used cautiously in reduced dosage. In emergency surgery ¼ to ⅕ the usual dose of narcotics, analgesics, and other premedications should be used avoiding parenteral administration where possible. Carefully adjust dose of anesthetics to response of patient. Withdraw pargyline two weeks before elective surgery.

Warn patients about the possibility of postural hypotension. Those with angina or coronary artery disease should not increase physical activity with an improvement in well being. Pargyline may lower blood sugar.

Avoid use of enteric-coated potassium tablets, as these may induce serious or fatal small-bowel lesions consisting of stenosis with or without ulceration. These small-bowel lesions have caused obstruction, hemorrhage and perforation frequently requiring surgery. Medication should be discontinued immediately if abdominal pain, distension, nausea, vomiting or GI bleeding occurs. These products contain no added potassium salts and if added potassium intake is desired, dietary supplementation is recommended. Coated potassium tablets should be reserved for cautious use when adequate dietary supplementation is impractical. In patients with a history of allergy or asthma the possibility of sensitivity reactions should be considered.

Precautions: Measure blood pressure while patient is standing to determine antihypertensive effect. Use with caution in hyperactive or hyperexcitable persons. Such persons may show increased restlessness and agitation. Withdraw drug during acute febrile illness. Watch patients with impaired renal function for increasing drug effects or elevation of BUN and other evidence of progressive renal failure; withdraw drug if such alterations persist and progress. Use with caution in patients with liver disease. As with all new drugs, complete blood counts, urinalyses, and liver function tests should be performed periodically. With prolonged therapy, examine patients for change in color perception, visual fields and fundi. Also reported have been: blood dyscrasias including thrombocytopenia with purpura, agranulocytosis and aplastic anemia; elevations of BUN, serum uric acid, or blood sugar. Symptomatic gout may be induced. In surgical patients thiazides may reduce response to vasopressors and increase response to tubocurarine.

Adverse Reactions: Pargyline may be associated with orthostatic hypotension. Mild constipation, slight edema, dry mouth, sweating, increased appetite, arthralgia, nausea and vomiting, headache, insomnia, difficulty in micturition, nightmares, impotence, delayed ejaculation, rash, and purpura have been encountered with pargyline. Hyperexcitability, increased neuromuscular activity (muscle twitching) and other extrapyramidal symptoms have been reported in a few patients with reduced cardiac reserve.

During intensive or prolonged therapy, guard against hypochloremic alkalosis and hypokalemia (especially the latter if patient is on digitalis). Observe all patients for signs of hyponatremia ("low salt" syndrome).

Reported thiazide reactions also include anorexia, nausea, vomiting, diarrhea, headache, dizziness, paresthesia, weakness, skin rash, photosensitivity, jaundice, and pancreatitis. Nocturia has been observed with the combination. 709075R

ABBOTT

TM-Trademark.

A breakthrough in the control of pain

Talwin®
brand of
pentazocine
(as lactate)

a potent injectable non-narcotic—
may be used in place of morphine
and other narcotic analgesics

A breakthrough in the control of pain

Talwin®

brand of
pentazocine
(as lactate)

a potent injectable non-narcotic—may be used in place of morphine and other narcotic analgesics

Talwin 30 mg. relieves pain usually as quickly and effectively as morphine 10 mg.*

- **whatever the intensity of the pain**
- **whatever the cause of the pain**
- **whatever the site† of the pain**
- **whatever the chronicity of the pain**
- **whatever the age†† of the patient**
- **without the liability of narcotics**
- **without the development of tolerance on prolonged use**
- **with less risk of severe respiratory depression than with morphine**
- **with less constipation**
- **with less urinary retention**

Clinical experience of more than 150 investigators with over 12,000 patients given varying dosages of Talwin shows that this potent injectable analgesic is not a narcotic.

Talwin has less risk of severe respiratory depression, urinary retention, and constipation than morphine—a great boon for postsurgical patients.

Talwin produces less nausea, vomiting and diaphoresis than meperidine.

Constipation and urinary retention are seldom a problem with Talwin.

Very rarely do hallucinations or disorientation occur (0.1% each).

No significant hepatic, renal, hematopoietic or neurologic disturbances have been reported.

Talwin is well tolerated even by the aged or very ill patients.

Used during active labor, its tolerance by the mother and newborn is comparable to meperidine's. As with all new drugs, Talwin should be used with caution in pregnant women and in women delivering premature infants.

Tolerance to the analgesic effect of Talwin has not developed with prolonged use.

Talwin gives significant relief of pain in from 15 to 20 minutes following I.M. or S.C. injection.

Talwin relieves pain usually for 3 hours or longer with a single injection; however, the duration may sometimes be less than with morphine.

86 per cent of medical and surgical patients obtained excellent to good relief with Talwin 30 mg. administered parenterally

---

*Its duration of action may sometimes be less than that of morphine.

†Should not be used for patients with increased intracranial pressure, head injury or pathologic brain conditions.

††Until sufficient experience is gained, Talwin should not be administered to children under 12 years of age.

Talwin
brand of pentazocine (as lactate)
used for pain of all types

Talwin has a wide range of usefulness in surgery

Types of surgical use	Number of patients	Efficacy				
		% Exc.	% Good	Exc. + Good	% Fair	% Poor
• Preoperative	118	31	52	83%	15	2
• Postoperative	914	58	28	86%	8	6
• Pre- and postoperative	12	75	17	92%	0	8
• Minor surgery	33	30	39	69%	0	31
• Traumatic	14	64	29	93%	7	0
• Dental	33	67	24	91%	3	6

Total patients............1124

Efficacy of 30 mg. Talwin I.M. and S.C. as related to types of surgical use in a cooperative study

Data in files of Department of Medical Research, Winthrop Laboratories.

[*] High incidence of poor results in minor surgery is due primarily to one study involving change of burn dressings in children; 9 of 19 patients obtained poor results with dose used.

Talwin relieves all types of pain in acute and chronic medical disorders

Type of medical pain	Number of patients	Percentage of relief				
		Excellent	Good	Exc. + Good	Fair	Poor
• Malignancy, pain in	161	44	37	81%	8	11
• Orthopedic; see also "Arthritis"	111	53	38	91%	5	4
• Cardiovascular pain; see also "Miscellaneous medical"	96	59	27	86%	6	7
• Genitourinary pain	83	42	33	75%	16	10
• Arthritis	76	33	51	84%	12	4
• Gynecologic pain	35	57	34	91%	6	3
• Cephalalgia	21	45	41	86%	9	5
• Gastrointestinal pain	19	89	5	94%	0	5
• Chest, including • Pleurisy • Pulmonary embolism and infarct • Lung abscess	12	83	17	100%	0	0
• Miscellaneous medical, including • Peripheral vascular disease • Thrombophlebitis • Cervical root pain • Facial neuralgia • Syringomyelia • Burns	108	50	39	89%	9	2

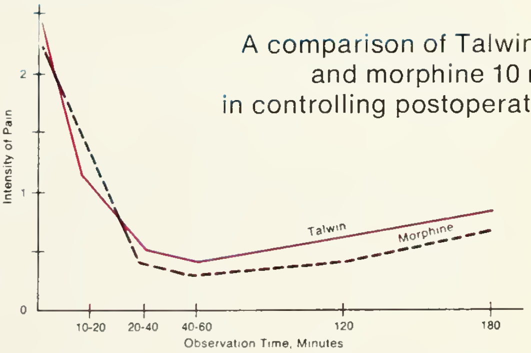
Total patients............722

Efficacy of 30 mg. Talwin I.M. and S.C. as related to types of medical pain in a cooperative study

Data in files of Department of Medical Research, Winthrop Laboratories.

See next page for additional product information

Talwin relieves pain as quickly as morphine



A comparison of Talwin 30 mg. and morphine 10 mg. I.M. in controlling postoperative pain[*]

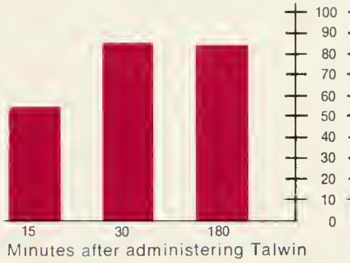
Figure 1.

Talwin 30 mg. proved equivalent to morphine 10 mg. in overall analgesic efficacy. During the early post-medication period (up to 40 minutes after drug injection), Talwin was superior in effect to morphine.

After observation periods ranging from 40 to 180 minutes there was no difference between the drugs in their effect on intensity. There were 141 and 119 complete patient records for Talwin and morphine, respectively, in this double-blind study. Other clinical investigators, studying duration, state that relief with Talwin may be obtained for up to three hours or longer, a period sometimes less than morphine's.

Talwin is as effective for severe pain (Fig. 2)[†] as for moderate pain (Fig. 3)[†]

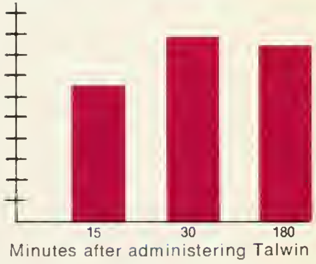
Figure 2.



Minutes after administering Talwin

Per cent excellent to good relief of severe pain obtained with 30 mg. Talwin in 218 postoperative patients

Figure 3.



Minutes after administering Talwin

Per cent excellent to good relief of moderate pain obtained with 30 mg. Talwin in 203 postoperative patients

Talwin does not require a narcotics prescription or narcotics records

The World Health Organization Expert Committee on Dependence-Producing Drugs concluded that "...there was no need at this time for narcotics control of pentazocine [Talwin] internationally or nationally."[‡]

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[*] Storer, E. H.: Data in the files of the Sterling-Winthrop Research Institute.

[†] Cooperative study, data in the files of the Department of Medical Research, Winthrop Laboratories.

[‡] *World Health Organization Technical Report Series*, No. 343, 1966, p. 6

A breakthrough in the control of pain

Talwin®

brand of
pentazocine
(as lactate)

a potent injectable non-narcotic— may be used in place of morphine and other narcotic analgesics

Contraindications: *Increased Intracranial Pressure, Head Injury, or Pathologic Brain Conditions in which clouding of sensorium is undesirable.* Talwin (brand of pentazocine) should not be administered in these cases, since drug-induced sedation, dizziness, nausea, or respiratory depression could be misleading.

Precautions: *Pregnancy.* No teratogenic or embryotoxic effects attributable to the use of Talwin have been seen in extensive reproductive studies in animals; however, like all new drugs, Talwin should be given with caution to pregnant women. A large number of patients in labor have received the drug with no adverse reactions other than those that occur with commonly used strong analgesics. However, as with other strong analgesics, Talwin should be used with caution in women delivering premature infants.

Ambulatory Patients. Since sedation, dizziness, and occasional euphoria have been noted, ambulatory patients should be warned not to operate machinery, drive cars, or unnecessarily expose themselves to hazards.

Certain Respiratory Conditions. The possibility that Talwin (brand of pentazocine) may cause respiratory depression should be considered in treatment of patients with bronchial asthma. Talwin should be administered only with caution and in low dosage to patients with respiratory depression (e.g., from other medication, uremia, or severe infection), obstructive respiratory conditions, or cyanosis.

Patients Dependent on Narcotics. Because Talwin is a narcotic-antagonist, patients dependent on narcotics and receiving Talwin may occasionally experience certain withdrawal symptoms. Talwin should be given with special caution to such patients. It has been observed that some patients previously given narcotic-analgesics for one month or longer had mild withdrawal symptoms when the drug was replaced with the analgesic, Talwin. After a short period of adjustment the subjects were usually able and willing to continue taking Talwin, and relief of pain was satisfactory.

Nonaddicted Patients Receiving Narcotics. Symptoms believed to be indicative of antagonism to the opiate may be observed rarely with administration of Talwin to patients receiving opiates for a short time. Intolerance or untoward reactions are seldom observed after administration of Talwin to patients who have received single doses or who have had limited exposure to narcotics.

Impaired Renal or Hepatic Function. Although laboratory tests have not indicated that Talwin (brand of pentazocine) causes or increases renal or hepatic impairment, the drug should be administered with caution to patients with such impairment. Extensive liver disease appears to predispose to greater side effects (e.g., marked apprehension, anxiety, dizziness, sleepiness) from the usual clinical dose, and may be the result of decreased metabolism of the drug by the liver.

Myocardial Infarction. As with all drugs, Talwin (brand of pentazocine) should be used with caution in patients with myocardial infarction who have nausea or vomiting.

Biliary Surgery. Until further experience is gained with the effects of Talwin on the sphincter of Oddi, the drug should be used with caution in patients about to undergo surgery of the biliary tract.

Adverse Effects: Talwin is relatively free from the undesirable side effects associated with morphine, such as constipation, urinary retention, or severe respiratory depression. Furthermore, Talwin produces less nausea, vomiting, and diaphoresis than meperidine.

In over 12,000 patients who received Talwin intramuscularly, subcutaneously, or intravenously, nausea, the most frequent adverse effect, occurred in approximately 5.0 per cent. In decreasing order of occurrence were vertigo, dizziness or lightheadedness; vomiting; and euphoria. Respiratory depression was reported as an adverse reaction in 1.0 per cent.

The incidence of each of the other adverse effects was well below 1.0 per cent: constipation, circulatory depression, diaphoresis, urinary retention, alteration in mood (nervousness, apprehension, depression, floating feeling), hypertension, sting on injection, headache, dry mouth, flushed skin including plethora, altered uterine contractions during labor, dermatitis including pruritus, dreams, paresthesia, and dyspnea occurred rarely after administration of Talwin (brand of pentazocine). Furthermore, each of the following adverse reactions occurred in less than 0.1 per cent: tachycardia, visual disturbance (blurred vision, diplopia and nystagmus), hallucinations, disorientation, weakness or faintness, muscle tremor, chills, allergic reactions including edema of the face, taste alteration, insomnia, diarrhea, cramps, and miosis; laryngospasm in one patient.

Talwin has not produced severe respiratory embarrassment in adults (never apnea), even with large amounts. A small number of newborn infants whose mothers received Talwin during labor had transient apnea. The incidence of temporary diminution in the rate or strength of uterine contractions is low after administration of Talwin, similar to that following meperidine hydrochloride. (In reporting no interference with normal labor in patients receiving Talwin, one investigator further stated that the drug may increase uterine activity.) Generally, no significant fetal heart rate change occurs.

Laboratory tests of blood and of liver and kidney functions have revealed no significant abnormalities. A minimum and probably insignificant increase in the per cent of eosinophils in peripheral blood counts and bone marrow occurred occasionally.

Talwin is well tolerated by patients with diabetes mellitus, and no changes in insulin requirements have been observed.

Dosage and Administration: *Adults, Excluding Patients in Labor.* Average recommended single parenteral dose is 30 mg., by intramuscular, subcutaneous, or intravenous route; may be repeated every three to four hours. Pain has been relieved in most patients with not more than three doses daily. Infrequently, selected patients have received single doses as high as 60 mg.

Patients in Labor. A single, intramuscular 30 mg. dose has been most commonly administered. An intravenous 20 mg. dose has given adequate pain relief to some patients in labor when contractions become regular, and this dose may be given two or three times at two- to three-hour intervals, as needed.

Children Under 12 Years of Age. Since clinical experience in children under twelve years of age is limited, the use of Talwin (brand of pentazocine) in this age group is not recommended.

Duration of Therapy. Patients with chronic pain who received Talwin for prolonged periods (e.g., over 300 days) experienced no withdrawal symptoms even when administration was stopped abruptly; furthermore, there was no tolerance to the analgesic effect.

CAUTION. Talwin should not be mixed in the same syringe with soluble barbiturates because precipitation will occur.

Treatment of Overdosage or Respiratory Depression. Talwin has not produced apnea or severe respiratory embarrassment in adults, even in large doses. Occasionally, however, moderate respiratory depression may occur. Means of maintaining proper oxygenation should be available in case of overdosage or respiratory depression, and methylphenidate (Ritalin®) should be administered parenterally. The usual narcotic-antagonists, such as nalorphine, are not effective respiratory stimulants for depression due to Talwin.

How Supplied: Ampuls of 1 ml., containing Talwin® (pentazocine) as lactate equivalent to 30 mg. base and 2.8 mg. sodium chloride, in Water for Injection. **Boxes of 10, 25, and 100.**

Multiple dose vials of 10 ml., each 1 ml. containing Talwin® (pentazocine) as lactate equivalent to 30 mg. base, 2 mg. acetone sodium bisulfite, 1.5 mg. sodium chloride, and 1 mg. methylparaben as preservative, in Water for Injection. **Boxes of 1.**

The pH of Talwin solutions is adjusted between 4 and 5 with lactic acid and sodium hydroxide.

Winthrop

Winthrop Laboratories, New York, N.Y. 10016

PRINTED IN U.S.A. ISSUED AUGUST, 1967 (1035M)

following infection

B and C vitamins are therapy: STRESSCAPS B and C vitamins in therapeutic amounts...help the body mobilize defenses during convalescence...aid response to primary therapy. The patient with a severe infection, and many others undergoing physiologic stress, may benefit from STRESSCAPS capsules.

Stresscaps®
Stress Formula Vitamins Lederle

FOR PROFESSIONAL RECOMMENDATION ONLY

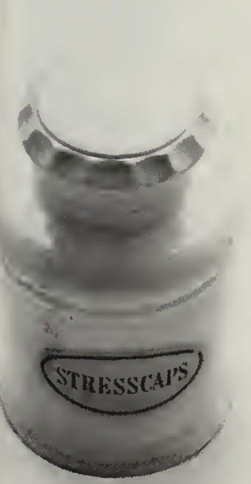
Each capsule contains:

Vitamin B_1 (as Thiamine Mononitrate)	10 mg
Vitamin B_2 (Riboflavin)	10 mg
Vitamin B_6 (Pyridoxine HCl)	2 mg
Vitamin B_{12} Crystalline	4 mcgm
Vitamin C (Ascorbic Acid)	300 mg
Niacinamide	100 mg
Calcium Pantothenate	20 mg

Recommended intake: Adults, 1 capsule daily, for the treatment of vitamin deficiencies. Supplied in decorative "reminder" jars of 30 and 100; bottles of 500.

LEDERLE LABORATORIES, A Division of American Cyanamid Company, Pearl River, New York Lederle

626-6—3612



Wounds, abscess, cellulitis

...and the complications of staph.

Staph reliably controlled with specific therapy

A suitable dosage form for every staph situation

From time of birth, the child is exposed to a whole range of potential staph infections: wounds; secondarily infected dermatoses; primary lesions, such as deep impetigo (ecthyma), boils and felons; and more serious conditions such as osteomyelitis, staph pneumonia and staph meningitis.

Bactericidal

Hardly a staph organism can resist the bactericidal action of Prostaphlin® (sodium oxacillin), as shown by a 34-month *in vitro* study. Of all staph isolates tested, 99.5% were sensitive to oxacillin.[1]

Clinically Proven

There is a high correlation between these *in vitro* findings and clinical results. Of 610 patients treated with Prostaphlin (sodium oxacillin), 89.8% were reported cured or improved, including those with staph infections resistant to penicillin G.[2] And since resistance does not appear to develop *in vivo,* therapy with oxacillin can be extended when necessary.

Outstanding Safety Record

Besides being staph-specific and rapidly absorbed—Prostaphlin (sodium oxacillin) has established an outstanding record of safety during five years of widespread clinical use. Continuous high blood levels of oxacillin have not produced toxic effects on kidney function, assuring a significant margin of safety. However, as with all penicillins, the possibility of allergic response should be considered.

Capsules, Oral Suspension and Injectable

Prostaphlin (sodium oxacillin) is available in three flexible dosage forms to suit the age of the patient and severity of infection—an oral solution for pediatric use, capsules, and multi-dose vials for injection.

PRESCRIBING INFORMATION: For complete information, consult Official Package Circular. *Indications:* Infections caused by Staphylococci, particularly those due to penicillin G-resistant Staphylococci. *Contraindications:* A history of severe allergic reactions to penicillin. *Precautions:* Typical penicillin-allergic reactions may occur. Safety for use in pregnancy and premature infants is not established. Because of limited experience, use cautiously and evaluate organ system function frequently in neonates. Mycotic or bacterial superinfections may occur. Assess renal, hematopoietic and hepatic function intermittently during long-term therapy. *Adverse Reactions:* Skin rashes, pruritus, urticaria, eosinophilia, nausea, vomiting, diarrhea, fever and occasional anaphylaxis. Rare cases of reversible hepatocellular dysfunction have occurred. Moderate SGOT elevations have been noted. Thrombophlebitis has occurred occasionally during intravenous therapy and leukopenia was noted in two cases. *Usual Oral Dosage:* Adults: 500 mg. *q.* 4 or *q.* 6 *h.* Children: 50 mg./Kg./day. *Usual Parenteral Dosage:* Adults: 250-500 mg. *q.* 4 or *q.* 6 *h.* Children: 50 mg./Kg./day. Treat beta-hemolytic streptococcal infections for at least 10 days. Give oral drug 1 to 2 hours before meals. *Supplied:* Capsules—250 and 500 mg. in bottles of 48. Injectable—250 mg., 500 mg., and 1 Gm. dry filled vial for I.M./I.V. use. For Oral Solution—100 ml. bottle, 250 mg./5 ml. when reconstituted. **A.H.F.S. CATEGORY 8:12.16**

References: 1. Abstracted from *Antibiotic Sensitivity of Staphylococci Studied from November 1962 through August 1965,* reported by Griffith, L.J., Staphylococcus Reference Laboratory, V.A. Hospital, Batavia, N.Y. 2. Data on file, Bristol Laboratories.

BRISTOL

BRISTOL LABORATORIES/Division of Bristol-Myers Co., Syracuse, N.Y.

Whenever you suspect staph

PROSTAPHLIN®

SODIUM OXACILLIN

easy
does
it!

tear, moisten, compare—that's all!

M 73
100 TESTS (APPROX.)
TES-TAPE®
Urine Sugar Analysis Paper
Lilly
Protect from direct light, excessive moisture and heat
FOR URINE SUGAR ANALYSIS ONLY
APPROX.
0%
1/10%
1/4%
1/2%
2% or more

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The Journal
of the
South Carolina Medical Association

Volume 63 October, 1967 Number 10

FALCIPARUM MALARIA:

A CLINICAL NOTE

A Health Hazard in Veterans from Viet Nam

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For most physicians in the United States, except for those who have served with the Armed Forces, clinical experience in the diagnosis and treatment of malaria has been nonexistent during the past 35 years, and has been observed only in patients who have acquired it during travel or military duty outside the United States.

Although it is highly improbable that malaria will again become a public health problem in the United States, it will be a real hazard for individuals returning from highly endemic areas who may develop initial or relapsing attacks after return to their homes, and after cessation of suppressive therapy as employed by the military. The greatest hazard will be for those recently returned from duty in Southeast Asia, and particularly from some areas of Viet Nam. The Office of the Surgeon General of the Army has recently advised that over 90% of individuals with smear-proved malaria were found to be infected with P. falciparum and only a small number due to P. vivax.

Chloroquine and Primaquine in combination are regularly employed as prophylaxis and suppressive measures against malaria by the Armed Forces. Thus the finding of such a high incidence of P. falciparum as compared with vivax infections indicates that for some strains of P. falciparum this combination is not effective. It has also been reported that chloroquine is not effective in the treatment of some of the P. falciparum infections, indicating that some strains are highly resistant to this schizontocide. Quinine, fortunately, has proved to be effective in the usual doses given for malaria.

For physicians not acquainted with the clinical forms of malaria, it is important to remember that P. falciparum malaria often does not present itself in the expected classical form in an initial or a relapsing attack with chilliness, vasoconstriction, chills, high fever, dehydration, polyuria, headache, vomiting, sweating, and after 6 to 8 hours, defervescence, as is classical in the tertian type with 3-day recurrences. Instead, with P. falciparum, patients are often afebrile though obviously very ill, and present as delirious or irrational individuals who may show signs of pupillary changes, meningeal irritation or hemiparesis with or without signs of increased intracranial pressure, and in some hypoglycemia may occur. Although anemia and splenomegaly are common in chronic cases, and acute hemolytic anemia or blackwater fever is a dread complication, in the earlier stages of P. falciparum infection, or in those with an initial attack, such expected findings may be absent. This form of cerebral malaria due to P. falciparum infection as described is highly and rapidly fatal and demands prompt therapy. In the apathetic type of attack, symptoms and signs usually occur with a continuous fever rather than an intermittent fever—weakness, prostration, severe dehydration, and circulatory collapse of a shock-like type occur. In the febrile or chill stages leucocytosis is often present rather than leukopenia. The algid or alvine form is characterized by severe vomiting, diarrhea, abdominal cramping and bloody mucoid stools. Fever usually when initially present continues in these cases for several days rather than alternating periods of every three days of chills, fever, and defervescence, as is classical in the vivax or tertian attacks.

That *malaria must be considered in the differential diagnosis of any sick individual who has recently returned from Southeast Asia, and especially Viet Nam*, has been urgently pointed out by The Office of The Surgeon General.

The usual thin blood smear will frequently not be helpful except in those with chronic infection, where an abundance of trophozoites, schizontes, or gametocysts may be identified. A properly prepared and stained thick film is necessary. Unfortunately, most of the current laboratory technicians and practicing physicians are not adept at preparing or interpreting thick films. Despite the hazards of quinine reaction and sensitization, there undoubtedly therefore will be instances where clinical judgment will dictate the need for prompt and adequate administration of quinine, now in short world supply, on the basis of clinical suspicion alone because of a time lag for proper interpretation of blood smears. Experience indicates that if the illness is malaria, clinical response to 1 gram of quinine q8h for 48 hours, and 0.6 gram q8h for an additional 72 hours is an adequate therapeutic period in which to observe a remission. Quinine is not necessary for vivax or for most strains of falciparum, and except for the resistant strains in some parts of Southeast Asia and Viet Nam, chloroquine in dosage of 1 gram, followed by 500 mg in 6 hours, and then 500 mg daily for two days, is adequate to control an acute attack, i.e. 2.5 grams in 72 hours.

If the patient is gravely ill and oral administration of quinine is impossible, or if vomiting is severe and recurrent, IV quinine 600 mg. in 500 ml or 1000 ml of saline or glucose in saline by slow IV drip, with careful observation for evidences of cardiac or circulatory effects is indicated, with a repetition of this at intervals of 6 to 8 hours until oral administration is possible. The total dose of quinine should not exceed 2 to 2.4 grams in 24 hours in any individual.

If relapses occur after eight days of treatment in a non-responsive chloroquine case, a prolonged course of quinine of 0.6 gram q8h for 21 days has been advocated, and if clinical symptoms remit, but asexual parasitemia persists as shown by blood smear, then Daraprim, 50 mg. daily for 3 days should be given concomitantly with sulfadiazine, 0.5 gram q6h for 5 days. Thick blood smears should be checked weekly for four weeks on all individuals following a clinical attack. After an attack, and after clearing of the parasitism, then chloroquine, 300 mg, and primaquine, 45 mg, should be taken once each week for eight weeks in order to eradicate the extraerythrocytic forms of the parasites which proliferate and mature in the reticuloendothelial cells of the liver.

The liver cells are infected by sporozoites inoculated into the host from the bite of a female anopheles mosquito into whose body the male, or macro, and female, or micro, gametocytes have been introduced from an infected human. Only in the mosquito by sporogony, or sexual reproduction, are sporozoites formed. The inoculated sporozoites are rapidly cleared from the blood of the victim following the bite of the infected mosquito, and only after entering and proliferating for eight to ten days in the liver reticuloendothelial cells and developing the cryptozoite phase to emerge as metacryptozoites, is the parasite ready to invade the erythrocyte. Here it undergoes schizogony, or the asexual phase as ring-formed trophozoites, later schizontes, and eventually merozoites, or develops in the sexual gametocyte forms. Only the metacryptozoites from the liver and microzoites derived from the merozoite in schizogony are capable of initiating and perpetuating the erythrocytic phase of the infection. It is not certain whether merozoites may infect the hepatic reticuloendothelial cells and initiate the cryptozoite phase in the same manner as the sporozoite derived from the mosquito does for all strains of malaria or in man; or whether the merozoite only remains latent as a microzoite in the reticuloendothelial cell and is later released to infect RBC but does not reproduce intracellularly other forms as cryptozoites. Thus there are differences that are to be anticipated in the prevention and cure of malaria or in experimental studies of drugs as to whether we are using agents which affect only schizontes and gametocytes, or whether the drug will also eradicate the sporozoites and its derivatives, in which case it is a true prophylactic.

If the drug is only a schizontocide, the erythrocytic stage of the disease will be controlled, but the patient remains liable to relapse from the hepatic reservoir of proliferating cryptozoites derived from the mosquito-inoculated sporozoite, though possibly this cycle may also be initiated from the schizont produced microzoite of the merozoite in the erythrocytic asexual phase. From blood-transmitted malaria studies, however, it appears that by interruption of the erythrocytic cycle with schizontocides, cure can be effected without the frequency of relapse usually experienced in the mosquito or sporozoite-transmitted form of infection, so that the number of microzoites derived from merozoites must not be as numerous as the sporozoite derived meta-cryptozoites. Pyrimethamine or Daraprim, and sulfadiazine, are effective in blocking cellular purine metabolism or the nuclear synthesis of adenine, guanine, and thymine by interfering with the enzyme pathways involving PABA to folic acid and the ultimate development of folinic acid or citra-vorum factor. Synthesis of this in the plasmodia in the cell division stage is essential for nuclear development. These organisms can use only the folic and folinic acid synthesized intracellularly and cannot use that available from extracellular or host body sources. These drugs are effective only in destroying the organisms in those stages of its complex life cycle as a parasite when nuclear development is occurring. They are not only effective as therapeutic agents in the extra-erythrocytic cycle, but are also true prophylactics by blocking sporogony in the mosquito. Gametocytes are not destroyed after development by these drugs, and may persist for three weeks in large number after clinical cure, but sporogony will not occur in mosquitoes who ingest even large numbers of gametocytes contained in blood of individuals with adequate levels of these drugs. Sporogony in mosquitoes ingesting such blood will not occur if as much as 50 mg. of Daraprim once each week is taken. The persistence of the effect after such doses has been shown repeatedly to last for some 8 to 11 days after a single dose, and this effect begins within three hours after the initial dose. Strain resistance to Daraprim will occur in time. The combination with sulfadiazine reduces this tendency. As Daraprim is not effective in destroying trophozoites and schizontes until schizogony is occurring in the asexual cycle, it is not a good drug for the acute stages of the disease.

Primaquine is even more effective than Daraprim in eradicating the extraerythrocyte latent infections of the liver cells, including the latent microzoites of the merozoite, but has a real hazard in that it often produces a hemolytic reaction after administration for the 14 days required for an adequate course. Such reactions are very frequent in the Negro.

Quinine, chloroquine and atabrine are effective only against the schizonts, but are very effective for this reason in rapidly bringing an acute clinical attack under control. They are not prophylactic but only suppressive. They do not prevent mosquito-induced or sporozoite infections, nor will they prevent spread of the infection by the inhibition of sporogony after ingestion of the macro and microgametocytes by the mosquito.

If an acute hemolytic reaction should occur in a patient during treatment with quinine for an acute attack, or as a complication from Primaquin administration, therapy such as employed for a transfusion reaction should be promptly given with the administration of 100 ml of 20% mannitol solution IV and urine alkalinization should be instituted when urinary flow occurs.

MALARIA RISE

More imported cases of malaria were reported in the first 100 days of 1967 than in all of 1966, according to *Morbidity and Mortality* (16:15). The publication lists 722 cases through April 17, including 712 military. In 1966, there were 678 cases, 563 military.

The 1967 cases were concentrated in California (49), Colorado (62), Georgia (74), Kentucky (86), North Carolina (89), and Texas (106)—all sites of military centers receiving Vietnam returnees.

Again encouraging physicians to report all suspected malaria, the National Communicable Disease Center noted that vivax malaria accounted for 84.2% and falciparum malaria for 13.6% of recent cases, as against respective proportions of 60.1% and 34.7% in 1966. "The increase in vivax malaria is important since the few episodes of introduced malaria (i.e., imported malaria transmitted by mosquito) in the U. S. during the past 15 years were due to *Plasmodium vivax*," NCDC said.

JAUNDICE DUE TO NITROFURANTOIN

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Jaundice due to nitrofurantoin (Furadantin) has been previously reported by Ernaelsteen and Williams.[1] The case submitted below is felt to represent another incident of this adverse reaction.

Drug-induced jaundice is quite common and has been ascribed to a multitude of drugs. Jaundice so induced can roughly be divided into three types: the more common being intrahepatic cholestasis; rarely actual destruction of red cells; and a true hypersensitive reaction on an allergic basis without demonstrable disruption of the red cells nor intrahepatic cholestasis. It is felt that the case reported will fall into this last category.

Case Report

This 31 year old white female gravida 8, para 7, abortus 1, was seen by one of us January 17th, 1967. At that time she gave a history of an onset approximately 3 days previously of frequency of urination associated with burning and dysuria with nocturia, 4 to 6 times a night. She was a well developed, well nourished, white female in no acute distress. There was marked tenderness of the suprapubic area. Pelvic examination revealed a procidentia of grade two with a cystocele and a rectocele, with marked bladder tenderness. The examination was otherwise negative.

Urinalysis was negative for sugar and albumin; the microscopic examination revealed approximately 5 white cells per high power field in the uncentrifuged specimen. The patient was started on Furadantin 50 mg, four times a day. Approximately 24 hours after beginning Furadantin and having taken six doses of the medication, she developed high fever which was spiking in character and ranged up to 104°. There was no dysuria. At that time she developed itching of the skin and a definite icteric tint was noted. The physical examination was essentially unchanged except that this was an obviously ill, jaundiced person complaining of severe itching. A specimen of urine for bile was negative. There was some fullness in the right quadrant but no tenderness was found. There was a fine macular rash over the forearms and trunk.

She was admitted to the South Carolina Baptist Hospital on January 21, 1967. Admission laboratory examinations showed a white count of 3,735, 12 Gm hemoglobin, 38% hematocrit. There were 8 eosinophiles, 61 segs., 22 lymphs, and 8 monos per 100 cells. Urinalysis was negative for bile, revealed 1+ bacteria, 10-14 epithelial cells and 3-5 white cells. Bilirubin direct was 3.25 mg/100 ml and indirect 1.5 mg; the total being 4.75 mg. Her stool showed 1+ blood, and was clay colored; there were no ova or parasites. Urine was positive for bile and had a normal amount of urobilinogen. Alkaline phosphates was 3.0, serum oxalacetic transaminase was 24, the serum glutamic-pyruvic transaminase was 30. Total protein was 5.7 mg, albumin, 3.0, and globulin, 2.7. Prothrombin time was 100% of normal, a routine gall bladder x-ray series revealed only a dim and an indefinitely suggestive outline of a gall bladder. Intravenous cholangiograms were done and carried through 5 hours and no dye could be seen in the biliary tree. A drip infusion IV cholangiogram was carried out with 40 ml of Cholografin given in 200 ml of dextrose and saline, but no visualization of the biliary tree nor of the gall bladder was obtained during a period of 7 hours observation. There was excellent outline of the kidney structure by this procedure. Chest x-ray examinations were normal.

Course in the Hospital

After admission to the hospital her temperature remained normal. Her appetite was good. She complained of severe itching and this resisted all measures of control. At no time did she complain of any pain and at no time did the physical examination reveal any tenderness of the liver. The liver never became enlarged. Enzyme studies, both glutamic and pyruvic transaminase remained normal. Bilirubin rose gradually during her stay up to 6.25 with a direct of 2.1 and an indirect of 4.1. Urinalysis continued to show urobilinogen present and in the normal amounts. Additional studies were: amylase 5.57 mg/100 ml, Coombs test negative, direct and indirect reticulocyte count reached a maximum of .2%, cephalin flocculation 1+ in 48 hours and the highest bilirubin obtained was 13 Gm. Urine test for pregnancy was negative on two occasions. Because of the confusion this case presented, a laporatomy was done on the 6th of February. This revealed a normal gall bladder and common duct with no indication of obstruction. A liver biopsy was done; examination of the tissue showed the architecture to be well preserved. The portal zones as well as the cords of the liver cells were normal in appearance. There was no indication of intrahepatic cholestasis nor other abnormalities.

Her post-operative course was essentially uneventful. The bilirubin remained 13 mg for three days post-operative and then began to fall. On the 7th post-operative day the bilirubin was down to 5.2. on the 11th post-operative day it was 2.7 and by the 15th post-operative day was 1.8. She was dismissed from the hospital on February 25 after a stay of 34 days.

She was seen in the office approxmiately 10 days later, asymptomatic with physical examination within normal limits. There was no jaundice of the skin or sclera.

She was seen again in the office two weeks later at which time she reported that she had had an onset 2 days previously of urinary frequency. dysuria and urgency with an actual leakage of urine. and gave a history that at that time she began taking Furadantin on her own. She had taken 50 mg four times a day and had taken approximately 6 doses when she developed chills, fever. with generalized aching, headache, and itching of the skin and developed an icteric tint which was recognized by members of the family the evening before she was seen in the office.

She was readmitted to the South Carolina Baptist Hospital on March 21, 1967. Her initial laboratory studies revealed 6.65 bilirubin with 1.9 direct and 4.75 indirect. Urinalysis was negative, Coombs test, direct and indirect, was negative. Alkaline phosphatase was 2.5. There was urobilinogen in the urine within the normal amount. There was no bile reported in the urine and the stool was negative for bile. The white count was 7.987 white cells. with 6% eosinophiles. 46 polys and 48 lymphocytes. At this time the patient was started on dexamethasone 0.25 mg three times a day. All other medication was immediately discontinued and over the next 24-36 hours the bilirubin rapidly dropped down to within normal amounts. The Coombs test was negative; both direct and indirect and transaminase was normal. Although severe itching of the skin was present during this second admission, appetite remained good, physical examination was entirely normal and she was dismissed 9 days after admission with a bilirubin of 1.2 Gm. She has remained well subsequently.

Comment

This case demonstrates with little doubt that jaundice was due to nitrofurantoin (Furadantin). In a review of this patient's history, it was shown that she had had her first course of Furadantin some 18 months previously and at that time had no problems with it. The latter two episodes of jaundice are associated with pruritus, rash, fever, and chills, eosinophilia, malaise, and headache, all of which are rather characteristic of a sensitization reaction. This case differs from that of Ernaelsteen and Williams in that biopsy material of the liver failed to reveal any cholestatis. Though there are many questions left unanswered in this case, it is felt it satisfies requirements for hypersensitivity reaction.

Summary

A case is presented in which jaundice followed nitrofurantoin therapy and is unique in that the reaction was repeated on a subsequent course of therapy with the drug. The patient cleared rapidly on steroids. It is felt that this case represents true hypersensitivity and not necessarily cholestatic jaundice due to the drug but only a hypersensitivity reaction to it. The explosive onset of chills, fever, drug rash, itching and jaundice on the second course of the drug is typical of that seen in true hypersensitivity reaction.[1]

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Jaundice Due to Nitrofurantoin. Gastroenterology 41:
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THE THORACIC AORTA

PART V. AORTIC ATRIAL AND VENTRICULAR FISTULAS

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Aortic atrial and ventricular fistulas are uncommon lesions but are being recognized with increasing frequency, both because of the improved methods of diagnosis and the impetus provided by the progress in surgical corrections that has developed since 1956. The fistula occurs because of a defect in the media of the aorta at the annulus, giving rise to an aneurysm of the coronary sinus with subsequent perforation into a cardiac chamber. Infrequently, endothelialized sinus tracts between the aorta and cardiac chamber are found that show no evidence of prior aneurysm formation.

These sinuses have been related to syphilis, cystic medial necrosis, Marfan's syndrome, mycotic aneurysms, and bacterial endocarditis but judging from the recent surgical experience, most appear to be congenital. The etiology and pathogenesis is sometimes difficult to assess accurately, as was so well exemplified by the case of a 19 year old male reported by Shumacker and Judson[15] who developed an aortic murmur following a severe febrile illness. Operation successfully corrected a sinus between the non-coronary sinus and the left ventricle. The sinus in their opinion was of congenital origin, though obviously infection could have caused it. On the other hand such a fistula is an excellent site for infection to occur.

Communications between the aorta and cardiac chambers occurs with penetrating and non-penetrating trauma, and there have been numerous reports of successful correction. [7, 9, 13, 17, 19] An unusual but important cause of aortic ventricular fistulas is the operative correction of ventricular septal defects and tetralogy of Fallot. Two patients that underwent successful closure of aortic-right ventricular fistulas on this basis were reported by Agustsson and associates.[1]

The rare condition, "aortico-left ventricular tunnel" was first described by Levy and associates[10] and subsequently by Cooley, Harris, and Rodin.[4] It is an abnormal channel which begins in the ascending aorta (above the right coronary artery), bypasses the aortic valve, and courses through the ventricular septum into the left ventricular cavity.

Pathogenesis of Congenital Aneurysms and Fistulas

Clarification of the pathogenesis is essential to a proper surgical approach and correction. The basic defect, which is just above the attachment of the valve, is due to a lack of continuity between the media of the aorta and the annulus fibrosus as demonstrated by Edwards and Burchell.[5, 6] Since this attachment actually involves the insertion of the aorta into the annulus, the lesion can be either above or below the valve or involve both areas, and this fact must be considered during operation. The role of infection is not known.

The aortic sinuses of Valsalva are predominantly intracardiac, therefore when the aneurysm develops and then eventually ruptures, it communicates with one of the four cardiac chambers forming a fistula. Kieffer and Winchell[8] collected a series of 78 cases of congenital aneurysms of the aortic sinuses including a previous collective review by Sawyers, Adams, and Scott,[11] adding 24 more from the literature, and included seven from the records of the University of Minnesota Hospital. Fifty-nine of the 78 were ruptured, with 56 communicating with cardiac cavities and one causing a communication with the pulmonary artery. The remaining two ruptured into the pericardium. Forty-two arose from the right coronary sinus, 16 from the non-coronary sinus, and only one from the left coronary sinus. Of 42 arising from the right coronary sinus, perforation occurred into the right ventricle in 31, the right atrium in five, the right atrium and ventricle in one, the left ventricle in two, the pulmonary artery in one, and the pericardial sac in two. In general this distribution is as expected, as the right coronary sinus lies adjacent to the right atrium and right ventricle and actually projects into the outflow tract of the right ventricle. Of the 16 arising in the non-coronary sinus, 13 perforated into the right atrium and three into the right ventricle. There was only one arising from the left coronary sinus in this series which perforated into the right atrium.

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Diagnosis

The onset of symptoms may be sudden and can usually be related to development of the fistula. Some patients experience the sudden onset of substernal pain which usually lasts several hours and is accompanied by breathlessness. Others experience a more insidious onset with frequent respiratory infections, increasing fatigability, and dyspnea. Manifestations of aortic or tricuspid insufficiency begin to develop. A strikingly wide pulse pressure with a pulsatile liver has been present in many reported cases. The characteristic murmur which was present in 94% of the cases collected by Sawyers, Adams, and Scott[11] is usually loud, harsh, and superficial in character and commonly accompanied by a coarse thrill. It is usually continuous and heard best close to the sternum in the third and fourth interspaces.

The hemodynamic effects of a ruptured sinus of Valsalva aneurysm are related to aortic insufficiency when communication is with the left side of the heart, to a left-to-right shunt when communication is with the right side of the heart, and tricuspid insufficiency when into the right atrium. These lesions must be differentiated from patent ductus arteriosus, aortic pulmonic window, interventricular septal defect with aortic insufficiency, pulmonary arteriovenous fistula, and coronary arteriovenous fistula.

Ordinary x-ray films and ECG may show evidence of a large left to right shunt or a large right ventricle. The pulmonary vascular markings are often increased above normal limits. A definitive diagnosis must be confirmed by cardiac catheterization and angiocardiography.

Treatment

The principles of treatment based on the pathology consist of removal of the aneurysmal sac and repair of the defect between the attachment of the aorta to the aortic annulus. In the latter one, the aorta is actually reseated into the annulus. This necessitates both aortotomy and atriotomy or ventriculotomy. The best approach is through a median sternotomy.

Earlier repairs, using cardiopulmonary bypass, were made through the chamber into which perforation of the aneurysm had occurred. Lillehei, Stanley, and Varco[11] reported three such cases successfully corrected in this manner. An interesting method of repair was reported by Morrow and associates[12] in which a compressed Ivalon prosthesis was used to plug a fistula between the right coronary sinus and the right atrium. Spencer, Blake, and Bahnson[18] introduced the combined approach through the aorta and cardiac chamber. They reported two cases successfully operated upon, one of which was accomplished with repair on the aortic side. Coronary perfusion was not used. Shumacker and Judson[15] repaired a fistula which arose from the non-coronary sinus and communicated with the left ventricle. Both defects could be visualized and were repaired through the aneurysmal sac which bulged from the ascending aorta. The only bridge of tissue separating the two defects was the annulus.

The combined approach through an aortotomy and atriotomy or ventriculotomy has been successfully reported by Shumacker, King, and Waldhausen[16] and Bosher[2] in four and two patients respectively. One of Shumacker's patients also had replacement of an incompetent aortic valve by a ball valve prosthesis. One of Bosher's had repair of the tricuspid valve which had been rendered insufficient by rupture of several chordae tendinae. The advantages cited are that true anatomic correction is assured, injury to the aortic leaflets and conduction system is avoided, and associated ventricular septal defects and valvular defects can be repaired.

Operative approach can usually be made best through a median sternotomy incision. An inflow catheter is inserted into the femoral artery while the outflow catheters are placed into the superior and inferior venae cavae through the right atrium. Immediately after instituting cardiopulmonary bypass, the aorta is cross-clamped to present over-distention of the involved cardiac chamber and to insure adequate perfusion. A slightly curved transverse incision is made through the aorta wall above the valve. Catheters are inserted into the coronary ostia and adequate cold coronary perfusion is then instituted. When the fistula communicates with the right atrium, right ventricle, or left atrium, the chamber is opened and examination made for other anomalies. The aneurysmal sac is excised and the neck inverted into the aorta. In rare instances where the fistula communicates with the left ventricle as reported by Shumacker and Judson[15] the approach and subsequent correction should be through the aorta and through the sac if possible with avoidance of a left ventriculotomy. Both the aorta and the left venttricular wall should be reseated to the annulus fibrosus.

From the aorta side, the defect at the neck is closed with interrupted sutures buttressed with small Teflon felt strips; which must pass through media above and annulus fibrosus below, so that these two structures will be brought in apposition. The aortic and tricuspid or mitral valves are examined carefully for any structural damage and repaired or replaced when necessary. The aortotomy is closed and the aortic clamp released, so that the integrity of the repair can thus be determined through the open cardiac chamber and the competency of the aortic valve evaluated.

Results of operative repair have been quite satisfactory during the past decade with extremely low morbidity and mortality.[2, 3, 7, 11, 12, 16, 18]

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Comparative results of cadaver and related donor renal homografts in man, and immunologic implications of outcome of second and paired transplants—D. M. Hume et al (Medical College of Virginia, Richmond). Ann Surg 164:352-397 (Sept) 1966.

Eighty-nine non-twin renal homotransplants were performed at the Medical College of Virginia in 82 recipients, with an overall survival of 66% up to 3½ years after transplantation. Recipients with related donor transplants demonstrated somewhat better survival, function, and immunologic acceptance of the graft than those with cadaver donor transplants. If a second transplant is performed after failure of the first, a better rate of acceptance is usually achieved. Thus it seems that cadaver kidney transplants should be only second choice.

Current status of arsenic in American cigarettes. R. H. Holland (University of Texas Southwestern Medical School, Dallas) and A. R. Acevedo. Cancer 19:1248-1250 (Sept) 1966.

A comprehensive arsenic analysis of eight brands of American nonfilter cigarettes was performed in 1961 and again in 1965. A steady decline in the arhenic content was noted since the original analysis in 1957. Arsenic also was found in the phenolic fraction of cigarette-smoke condensate. At the present level it is doubtful that cigarette-smoke arsenic is a strong carcinogen unless the smoker consumes two or more packages a day. It is also probable that the arsenic carcinogen in cigarette smoke is triphenyl arsine, which the authors recently have wound to have carcinogenic activity on mouse skin.

A PENDLETON DOCTOR'S OLD ACCOUNT BOOK

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Charleston, S. C.

Among the medical items which were on display at the recent Greenville Health Fair was one which originated in Pendleton, and over the years found its way to the collection of medical memorabilia in the Library of the Medical College of South Carolina.

Dr. William L. Jenkins was a graduate in 1837 of what was then known as the Medical College of the State of South Carolina. There he wrote his graduation thesis on Hydrocele. Apparently he took up residence in Pendleton shortly afterwards and continued to practice there until his death in 1868. During the War of Secession he was a regimental surgeon in the Confederate Army. His tattered old account book includes the years 1840 to 1848 and records various charges made by Dr. Jenkins for his services.

His practice seems to have been in "Pendleton Village," though occasionally he went to "Pickens Court House," or Pickensville, as he also called it. His patients included many familiar names such as Col. Thos. J. Pickens, Capt. George T. Anderson, Major Elam Sharpe, Col. John E. Calhoun, Col. William Sloan, Capt. R. T. Wilson and Col. Sam Warren. However his clientele was by no means limited to residents with military titles and he attended the families of Earles, Harlestons, Striblings, Sloans, Warleys and Campbells. There are several entries for services to the Hon. John C. Calhoun and Mrs. Calhoun. Some of his patients were obviously of Lowcountry origin or association, as we find the names of the Hon. Langdon Cheves, Col. Thomas Pinckney, Gaillard, C. C. Pinckney, and Thos. P. Huger. In those days Pendleton was a favorite resort for the Coastal people.

Dr. Jenkins, like nearly all physicians of the day, dispensed his own drugs, and many of his charges were made for remedies of various sorts such as quinine, calomel, opium, paregoric, salves, snakeroot, manna, hive syrup, guiac, pink root and myrrh. He treated masters and slaves alike.

The charges made would seem rather minute in comparison with those of the present day, but the relative value of money must be considered in judging them. A yardstick is given in a note in the account book which says that Dr. Jenkins paid Mr. Sloan's carpenter, or possibly used his services as payment for medical attention, for a period of 37 days. For this the charge was 80 cents a day or a total of $29.60.

The charge for drugs was usually 25¢ sometimes 50¢ and not infrequently a fractional amount such as 31 and 1/4 cents. For a visit and drugs furnished the charge was usually $1.00, and never exceeded $5.50 even for visits requiring travel and attendance at night. Dr. Jenkins was not much inclined to the practice of bleeding, which was still popular in his day. Only once is a venesection recorded and the charge for it was 50¢. Fractures were treated for $5.00 and the five obstetrical cases which are recorded in the book charged from $5.00 to $10.00 apiece. Surgery was limited and consisted mostly of opening superficial abscesses. Apparently Dr.

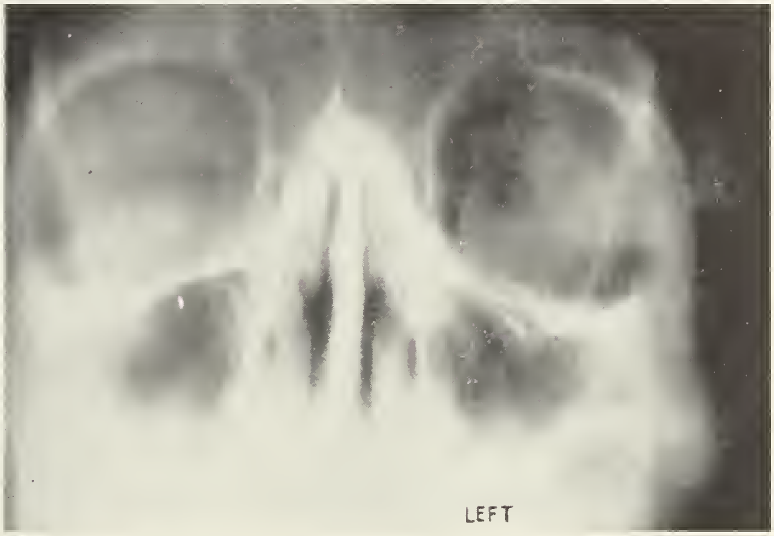
Jenkins did not get rich from his practice. The total amount entered on his book for the year of 1844 was $260.00. Even though that was a lot more money then than it is now it does not seem like much professional income, and very likely Dr. Jenkins, like many other doctors of the time, augmented his finances by planting or other activity. It may be judged from the book that he was not pressed for his medical services, though apparently he enjoyed the confidence of the better people of the community. His entries sometime skip several days. Perhaps for what he did in the unrecorded days he was paid in cash, but it is more likely that his practice was of a limited nature. It also included a bit of dental extraction for which his fee was 50¢.

Dissecting aneurysms of the aorta. M. E. DeBakey et al. Surg Clin N Amer 46:1045-1055 (Aug) 1966.

The clinical and pathological patterns of dissecting aneurysms of the aorta are now better understood and effective surgical management has been developed for the three basic types. In Type I the aneurysm arises from a tear in the ascending aorta and requires repair of the intimal tear and obliteration of the false lumen. Correction of aortic valve insufficiency is by resuspension of the aortic valve commissural attachment. The dissecting process is limited to the ascending aorta in Type II and resection with graft replacement of the ascending aorta is the choice of treatment. Because of aortic annular distortion in this form of the disease, replacement of the aortic valve with a caged-ball prosthesis is often required. Dissecting aneurysms arising from an intimal tear at or distal to the origin of the left subclavian artery, with distal dissection possibly limited to the descending thoracic aorta, are of the third type. In this group temporary left atrial-to-memoral-artery bypass with a pump is used. Resection and graft replacement of the area of torn intima and dissecting process, and obliteration of remaining distal false lumen is the surgical procedure indicated.

X-RAY FILM OF THE MONTH

S. E. PUCKETTE, JR., M. D.
Medical College Hospital
Charleston, S. C.



This 38 year old colored male was seen for the complaint of a "black eye" the "morning after" a fist fight with a friend over the question of just how much liquor should be consumed upon the offer of a swig. Periorbital ecchymosis and edema were present along with some subconjunctival hemorrhage. The left globe appeared to be fixed in a downward position and hypoesthesia over the left upper lip, lower left aspect of the nose and left lower eyelid were noted. Crepitation over the eyelid was elicited on palpation. A routine facial bone x-ray series was first obtained and then laminograms, one of which is shown above, were ordered.

This is the case of a "blow-out" fracture of the orbit. In this type of fracture there is an isolated fracture of the orbital floor with downward displacement of the bone fragments and orbital contents; the infraorbital rim remaining intact. The mechanism of production will be understood if one will examine a skull and note that the medial aspect of the orbital floor is a rather thin structure. Compression of the orbital contents from blunt trauma to the globe is transmitted in a hydraulic fashion equally to all portions of the bony wall and if sufficiently great, causes the weakest area to give, i.e. the floor. Some of the more common diagnostic features are: (1) a characteristic history of being hit in the eye usually either with a fist, a baseball, or projections on an automobile dashboard. (2) Abnormalities of extraocular muscle motion, usually a restriction of motion in the vertical axis. It has generally been held that this is due to entrapment of the inferior rectus or inferior oblique or both muscles at the fracture site. Others feel it is due to traumatic involvement of the muscles or their nerves.[1] (3) Hypoesthesia of the skin area supplied by the infraorbital nerve. This nerve runs along the floor of the orbit and is easily injured in this type of fracture. (4) Enophthalmos; this is of course produced by the herniation of the orbital contents downward into the maxillary sinus. Although not occurring in all cases, it is a good indication of the severity of the condition. It may come on later, i.e. 5 to 15 days after the trauma as the edema subsides.

Although plain film studies may be diagnostic, laminographic cuts through the floor of the orbit with the patient positioned so that the floor of the orbit is in a vertical position demonstrate the fracture more readily. In the above film, one will note the fragment of bone bulging downward along with orbital soft tissues. If one will compare the two orbits an accumulation of air in the left orbit will be recognized. This, while not commonly seen, obviously indicates a communication between the sinus and the orbit and explains the crepitation.

Surgery is directed towards elevation of the floor to its normal location and obtaining adequate freedom of motion for the extraocular muscles. Early treatment is to be preferred over delayed surgery. It can be accomplished either through a Caldwell-Luc approach, or an orbital approach, the former usually being the procedure of choice.

REFERENCE

1. Atiye, W. A., May M. and Gildersleeve, G. Acute true blow-out fractures of the orbit. Sou Med J 59:332 (1966)

Lumbar epidural analgesia in obstetrics. A. S. Paton. Med J Aust 2:449-451 (Sept 3) 1966.

From a series of 505 cases, lumbar epidural block proved to be a safe, effective, and reliable form of analgesia for the relief of pain during labor and delivery. It should not be regarded as a technique to be reserved for prolonged and complicated confinements. The only contraindication to its use are hemorrhage, infection at the site of injection, and a history of previous cesarean section. Lumbar epidural block can abolish the pain of labor without interfering with the progress of labor. The duration of labor may be shortened by the removal of any central inhibitory factors that may be acting as a result of excessive pain. There is less neonatal depression because the need for analgesics and anesthetics is virtually abolished. In the interests of safety and efficiency, this technique should be employed only in institutions which can provide a 24-hour anesthetic staff.

Editorials

Forensic Faux Pas

The spectacle of a lawyer exhorting in court for a premise which he must know to be of questionable validity, if not morally tenuous or completely fallacious, is perplexing to most physicians. The average M. D., brought up as he is in a rigid scientific discipline, finds it difficult to accept a plea which is obviously distorted or bent to the letter of the law in apparent disregard of what he instinctively recognizes as just or right. For in the practice of medicine we are, in a sense, all judges. We are constantly weighing the evidence pro and con and coming to our own decisions.

But in court the judgment is not ours to make. Our judicial system is so designed that almost any plaintiff can have his day no matter how preposterous his claims, provided he can find an attorney to argue his case. The fundamental distinction here between the approach of law and that of medicine is that the lawyer's position is a *biased* position. He is an acknowledged advocate for one side of the case. If we physicians can understand and make allowances for that, some courtroom proceedings that dismay us may make more sense.

Notorious in recent years has been an alarming spawning of damage suits which have doubled and tripled liability insurance rates all over the country. On the one hand every automobile owner, employer and professional man must wrap himself in a protective coat of liability policies, while on the other hand it is always open season in court on insurance companies which are big and strong and well able to pay claims of almost astronomical amounts. Of course these losses are passed along to all of us in the form of ever higher premium rates, but that consideration is irrelevant in the courtroom.

Certain attorneys achieve distinction as "plaintiff's lawyers." Indeed, that has become a sort of specialty in law, one which is at times sullied by "ambulance chasing" types of abuses. Unfortunately a few physicians have become virtual habitues of the courtroom, sitting almost exclusively on the plaintiff's side of damage suits giving testimony for undisclosed fees. Somehow when a practice is lucrative enough it becomes remarkably easy to rationalize one's professional misgivings about it and even becloud one's professional judgments.

A current fad in damage suits seems to be coronary thrombosis. In spite of the fact that atherosclerosis is generally recognized as the underlying pathology of the leading cause of death in the United States, that it develops over a period of many years and cannot be diagnosed with certainty until nearly the end stage has been reached, employers are being sued with increasing frequency because of myocardial infarctions sustained by employees at work, ascribed to alleged over-exertion or mental stress incident to employment. Certainly it would be unusual indeed if so common an illness did not occasionally strike during working hours. Yet a typical plaintiff's argument will completely disregard virtually all the known facts of etiology of this disease—its familial incidence, the role of diet, tobacco, obesity and physical exercise, its relationship to lipid metabolism and to diabetes, hypertension and doubtless an X factor or two—and claim that unusual physical or mental stress suffered at work was the cause of the employee's attack. Disheartening it is to see as a party to such legal chicanery an otherwise conscientious and respected physician. Actually sizable judgments have been awarded on medically flimsy evidence, and legal liability in coronary occlusion is assuming in certain circles the important legal status of a precedent. The lengths to which such a precedence could be carried are appalling and at some stage it all must reach the point of ridiculous absurdity.

Recently the New York State Board of Regents released the names of fourteen physicians and one dentist whose licenses were revoked or suspended because of "padding and signing false medical bills and making fraudulent diagnoses in collusion with lawyers to defraud insurance companies" in a so-called "ambulance-chasing racket." Furthermore the New York Board is launching an inquiry into the practice which they anticipate will ultimately involve "hundreds of physicians." Responsible and effective action by our profession is encouraging, for unless medicine does police its own ranks in this way a license to practice can become a blank check cashed at the expense of the entire medical fraternity and of the public. Many local medical societies are reviving long dormant committees on forensic matters. Elsewhere physicians have agreed upon schedules of standard fees for giving medical testimony, fees that are in proportion to the time and effort expended rather than to the size of the claim. One might hope that the legal profession will follow suit.

On this question the American Medical Association has a few things to say. After stressing that a physician should never testify in any area of specialization in which he is not qualified, that he should be courteous and modest in court, avoiding argument with the attorneys, that he should admit to the fallibility of medical opinion and should set forth his testimony in simple layman's terms, the AMA admonishes us to "at all times, keep the dignity befitting a doctor." That dignity precludes medico-legal meddling. The professional status of a physician or attorney involves a very real responsibility to the public—in the courtroom as well as in the office.

Dale Groom, M. D.

Ah, Sweet Medicare

I am, have been, and always will be opposed to any form of socialized medicine as are most of my fellow physicians.

There are, howver, some intersting aspects of our present day Medicare.

Time and again, in days gone by, I have been surrounded by my attorney friends who have goaded me with such as, "Ha, Ha, Ha, just wait until Medicare comes in. Then old Doc's nose will be cut short." (Though it is not original with me, it has been said many times that laws are made by lawyers, for lawyers.) My consistent reply to them was that I was irrevocably opposed to Medicare or any other form of socialized medicine, but that I, and my fellow physicians would be far better off economically if and when Medicare became a reality.

It has happened! I am receiving and certainly will continue to receive very fair fees from elderly patients from whom otherwise, I would be unable to collect, through the courtesy of my old uncle, Sam. This is at is should be under Medicare. If others, including hospitals and other dispensers of medical goods and services, are to be paid by our dear old bewhiskered uncle, there is no reason why the physician should not be paid also.

There is a very ironic note. In the lawyer-legislator's eagerness to socialize, they have somehow managed to socialize themselves. It is my understanding that the old town drunk and derelict and the repeater criminal is "entitled" to legal representation. I am further advised that these social derelicts have "appointed" attorneys who are required to defend them, even though they might not believe their client's cause, for a very minimal fee.

There has been an ironic twist of fate, hasn't there? But, as stated previously, regardless of my apparent economic betterment, I was, am, and will continue to be opposed to Medicare or any other form of medical, legal, or any other type of socialism.

T. E. Edwards, M. D.

Professional Courtesy

Adopted by Judicial Council of The AMA
June 17, 1967

The custom of professional courtesy embodies the ancient tradition of fraternalism among physicians in the art which they share, and their mutual concern to apply their learning for the benefit of one another as well as their patients. The Judicial Council reaffirms and endorses the principle of professional courtesy as a noble tradition that is adaptable to the changing scene of medical practice.

Professional courtesy is not a rule of conduct that is to be enforced under threat of penalty of any kind. It is the individual responsibility of the physician to determine for himself and within his own conscience to whom and the extent to which he shall allow a discount from his usual and customary fees for the professional services he renders, and to whom he shall render such services without charge as professional courtesy.

The following guidelines are offered as suggestions to aid physicians in resolving questions related to professional courtesy.

1. Where professional courtesy is offered by a physician but the recipient of services insists upon payment, the physician need not be embarrassed to accept a fee for his services.

2. Professional courtesy is a tradition that applies solely to the relationship that exists among physicians. If a physician or his dependents have insurance providing benefits for medical or surgical care, a physician who renders such service may accept the insurance benefits without violating the traditional ethical practice of physicians caring for the medical needs of colleagues and their dependents without charge.

3. In the situation where a physician is called upon to render services to other physicians or their immediate families with such frequency as to involve a significant proportion of his professional time, or in cases of long-term extended treatment, fees may be charged on an adjusted basis so as not to impose an unreasonable burden upon the physician rendering services.

4. Professional courtesy should always be extended without qualification to the physician in financial hardship, and members of his immediate family who are dependent upon him.

QUIDNUNC

The phenomenal rise in emergency room visits not only relates to the public's growing awareness of the hospital as the primary community-health center but also is a symptom of something wrong with the out-of-hospital provision of care.

The refusal of many doctors to take new patients, or offering appointments days or even weeks or months ahead, the interminable waiting in reception rooms, the very short time per patient, the interposition of assistants or the telephone between the patient and the physician, physician unavailability on Wednesdays, nights and weekends and the difficulty of reconciling disparate—and often conflicting—specialist opinions serve to discourage the patient—entirely aside from financial considerations. Some wait until a crisis arises and then go to the emergency room. Others resort to the growing body of "do-it-yourself" health literature. Still others stay away from medical care altogether.

—New Eng J Med 276:1237

What happens when people are thrown out of work?

In mid-April substantial reductions in employment by the nation's 4,500,000 independent business firms was reported by the research staff of the National Federation of Independent Business.

This data, based on the first 15,000 independent business proprietor respondents for the 1967 year long continuous survey showed that 15 per cent of those dropping employees report such action was necessary due to the imposition of the new minimum wage laws. This result is noted largely in the smaller communities and the rural areas.

ABBREVIATED MINUTES OF THE ANNUAL MEETING

South Carolina Medical Association

MAY 8, 9, 10, 1967

(Continued from September Issue)

The next report is that of the Treasurer, Dr. Howard Stokes:

Dr. Howard Stokes, Treasurer:

(Dr. Stokes gave a very general report and turned in the report of Raymon R. Finch & Co., Certified Public Accountants, Columbia, S. C. This report appears in the full minutes)

(At the conclusion of his report Dr. Stokes stated):

Now, I could not close my report without thanking Mr. Meadors and his very capable and efficient office. How so few can really do so much, so efficiently, I don't think any of us will ever understand.

I should also like to emphasize the words of our next President, Deacon Eaddy, by saying that each year I am more and more impressed with the quality of leadership of our State Association. I started to say that before they became members of the House of Delegates or before they became officers of the Association, they didn't seem to be very much but after they once were members of the House, or served in other capacities, they became truly dedicated physicians. I am honored to have served you as long as I have as treasurer, and I tell you I enjoyed the company. Thank you. (Applause)

Dr. Joseph I. Waring, Editor of the Journal:

Mr. President, members of the House of Delegates, the editor's report has to be rather repetitious because we seem to have the same kind of problems from year to year though they change a little bit in intensity and quality. If I may review them in a little different wording from last year's report that may bring it closer to your mind.

The Journal is in reasonably good condition, but as always, subject to improvement with your help. Advertising revenue has returned to a better level and promises to increase. By reason of this, we can produce a larger Journal, depending on the ability of the Editor to extract desirable material from members of the Association. Sometimes, in desperation, he is forced reluctantly into publishing material that he recognizes is not of the very best quality, but a rather chronic dearth of papers which limits selection of the better material is a constant problem.

The editorial Board invites your continued and increasing active interest in your publication. It seems unlikely that the Journal would be seriously affected by the desired ruling of the Internal Revenue Service concerning taxation of advertising in the Journal, inasmuch as the tax will apply to net profits, a commodity which we have not been troubled with for some years.

Dr. William L. Perry, Chairman of Council:

A special meeting was called and Council met in Columbia within 30 days after the annual meeting last year for the purpose of formulating the new committee system adopted by the House of Delegates at that meeting. This was done. A retirement plan for the employees of the State Medical Association was also presented and adopted.

In November the annual meeting for adoption of the budget was held and the budget was presented. This was comparable to that of the previous year and was adopted.

Cognizance has been taken of the activity of the Student AMA. Financial support and recognition have been given by Council for the state and national organization.

Dr. Joe Waring requested permission to give to each senior medical student a brochure which he has prepared setting forth the structure of the Medical Association and the advantages of belonging to it. Also included in the brochure is information regarding the various insurance plans sponsored by the State Association.

The Executive Secretary's activities and success with the legislation involving the Osteopaths was recognized by Council and special commendation was extended to Mr. Meadors.

It was called to the attention of Council that some very inappropriate advertising is being done by men in the so-called health field. Council has requested the Executive Secretary to look into the feasibility of legislation barring advertising of those indulging in any aspect of the healing arts operating under the Medical Practice Act.

Mrs. Banov, representing the Woman's Auxiliary to the South Carolina Medical Association, appeared before Council and presented a very impressive report on the activities of the Auxiliary during her term of office. She also presented the President-Elect of the Auxiliary, Mrs. Strohecker of Columbia. Mrs. Hagerty presented the work of the South Carolina Health Careers Club. This is a continuation of the work begun by the Medical Auxiliary. She will present concrete plans and needs to Council.

Council recommends to the House of Delegates that the medical aspects of Title XIX (Federal Matching funds for state medical programs) be under the direction of the State Board of Health. Council urges all members of the Association to use their influence to bring this about. This will be covered further in the Executive Secretary's report.

Council recommends to the House of Delegates that they instruct the Legislative Committee of the South Carolina Medical Association to consider legislation in the field of blood transfusions which would classify this procedure as a service rather than a commodity.

Mr. Edward C. Austell, Trust Officer of the First

National Bank of South Carolina, presented before Council a retirement plan under H.T. 10. This is a plan for a tax break to physicians and their legitimate employees.

While I am here I would like very much to thank the Council for its diligent work and I would like to say it is with deep regret that we lose three members of Council, Dr. Joe Thomas, Dr. Wyman King and Dr. Roderick Macdonald. They will not be back on Council.

I would like at this time to thank every member of this profession for going to bat when they were called upon in our strenuous task in Columbia, which Mr. Meadors has just discussed. We have a lot of friends in the legislature and I urge you to please go back home, if you haven't already thanked them for what they did for us, thank them again because we will certainly need them next time.

I would like to thank Dr. Johnson for allowing me to serve under his administration which I compliment him most highly for. It has been my pleasure to serve as Council Chairman this year. I thank you. (Applause)

The Chair: Thank you, Dr. Perry. The Council under your leadership has certainly done outstanding work.

There are two paragraphs in Dr. Perry's report that will be referred to the Reference Committee on Legislation and Public Relations:

(1) "Council recommends to the House of Delegates that the medical aspects of Title XIX be under the direction of the State Board of Health. Council urges all members of the Association to use their influence to bring this about."

(2) "Council recommends to the House of Delegates that they instruct the Legislative Committee of the South Carolina Medical Association to consider legislation in the field of blood transfusions which would classify this procedure as a service rather than a commodity."

The next report will be that of the Delegates to the American Medical Association.

Dr. Joe Cain: Mr. President, I would like to yield to Dr. Joel Wyman. He will report on the annual meeting and I will report on the interim meeting. He will give his first.

The Chair: Thank you, Dr. Cain. The Chair recognizes Dr. Wyman who presented a comprehensive report which appears in the full minutes.

Dr. Wyman noted that nine resolutions were presented by the South Carolina delegation. They were as follows:

No. 1 Request For Lower Interest Rates To Students and Interns Under the AMA-ERF Program.

This was not adopted.

Resolution No. 2 Relative to Utilization Review Committees and Claims Review Committees.

No action was taken.

Resolution No. 3. The Individual Responsibility Program.

This was adopted.

Resolution No. 4. Opposition to the Use of Generic Names for Drugs.

This report was not adopted but a resolution by the California Delegation which expressed the same intent was adopted.

Resolution No. 5. Subject: Section 1801, P.L. 89-97.

This was adopted with the following amendment: Resolved that state and county medical societies alert the individual members to the possibility of violations of this section of the act and provide a mechanism by which such violations can be reported to the AMA.

Resolution No. 6. Relative to AMA Advisory Committee to the Department of Health, Education and Welfare.

This resolution requested that the House of Delegates instruct the Board of Trustees to appoint Dr. Edward Annis, Dr. Amos Johnson and Dr. William Lamonte, Jr., members of the AMA advisory committee to the department of HEW. This was not adopted but reference committee urged advisory committee to make more effective use of these consultants in the future.

Resolution No. 7. Condemnation of Public Law 89-97.

This was not adopted.

Resolution No. 8. Senate bill S-2568, the Hart Bill. This resolution was considered with resolution No. 37 from the Wisconsin delegation and No. 82 from the California delegation.

The reference committee agreed with the intent of these resolutions and in lieu of this resolution the following statement was adopted: The AMA opposes the enactment of S-2568 89th Congress and all similar legislation.

Resolution No. 9. Support of Hospital Based Specialists.

A similar resolution was also introduced by the section on pathology. Due to the publication of Medicare Regulations No. 5 three days before the effective date of Medicare, which regulations would seriously interfere with the practice of medicine and which are contrary to Section 1801 of PL 89-97, the House of Delegates instructed the Board of Trustees to request the Social Security Administration for an extension of 90 days before final adoption of the proposed regulations in order that the AMA and all other interested medical organizations have a reasonable time to study and submit recommendations. It further recommended that all physicians who were developing contractual relations with hospitals for professional services should delay the finalization of agreement pending the analysis of Regulations No. 5.

The next report will be that of Dr. Joe Cain, delegate to the A.M.A.

Dr. Joe Cain, Delegate to A.M.A.: Mr. President, members of the House of Delegates. I certainly want to thank my alternate I think Dr. Wyman gave one of the most comprehensive reports from the American Medical Association meeting that I have ever heard and I am real proud of him as my alternate.

My report today is going to be directed entirely on the question of AMA disability insurance. As your president stated, we have got more correspondence concerning this one item than any other controversial subject which has ever come before the Medical Association, including Medicare and anything else. The reason for this, I presume, is we are still looking for some sort of security and thought that the disability insurance plan offered by the AMA might be a step in that direction.

As you know, five years ago this coming September 1st, the AMA entered into a contract with the Continental Casualty Insurance Company concerning a payment for the time that physicians were disabled, and this plan was unique in that it guaranteed lifetime benefits to the people who held the coverage if they were totally and permanently disabled from practicing medicine. Also, they had a waiting period of one year before benefits started after the disease or accident occurred and because of this one-year waiting period the coverage was offered at a price which the average person could afford to pay. The Continental Casualty Insurance Company, after about two years, began to get a little leery and worried that they had made a contract which was not going to be profitable and, indeed, one on which they might lose considerable money. So, after two years, they made overtures to the Board of Trustees of the American Medical Association that this policy be modified, that the benefits be curtailed or that the premium be raised. At that time the Board of Trustees refused, absolutely, to change the contract.

Upon such notification the Continental Insurance Company informed the Board of Trustees that after the five-year period, which is guaranteed in the contract, that is on August 31, 1967, that they would under no circumstances consider rewriting the contract under the same terms.

Now, since that time the American Medical Association has done a great deal of work on this situation, realizing that the deadline of August 31st was coming up. There have been introduced into the annual assemblage and the clinical sessions of the AMA, in the last two years, several suggestions by the Board of Trustees which the House of Delegates has either accepted or modified or rejected. Now, one of the main criticisms concerning the original plan was that we had no arbitration claims committee. In the original planning no claims committee was authorized. If you had a claim against the Continental Insurance Company you had to depend on their interpretation of the disability as to whether or not you got paid. One of the things that the House of Delegates asked the Board of Trustees to incorporate in the new contract was an arbitration committee, where there would be members of the Association, members of the company and maybe a few outside people who would arbitrate the claim.

I would like to explain to some of you, this is because some of the letters we got indicated that there was some confusion about whether or not Dr. Johnson and I were on the Board of Trustees of the AMA or the Delegate to AMA, and they thought that we could step right out there and do something about this thing, right quick. We did something about it, which I will tell you about after a while, but we were unable to sit in the Board of Trustees because we hadn't reached that height of eminence yet, and Dr. Price has not got the influence there that he once had. So, the Board of Trustees negotiated with the Continental Casualty Company and came up with a contract which had the claims committee in it and had a lowered premium for a certain age group in the Association, but eliminated entirely the lifetime benefit. And that is something which, I think, caused most of the furore because doctors who bought this contract, in good grace, they felt that if they were unfortunate to be disabled that they would have something to fall back on.

Now, steps into the picture a twenty-seventh company. Dr. Johnson told you that the AMA consulted with 26 other companies, nobody would write the same contract which the Continental was giving up. They secured private actuaries and everybody, 26 companies plus private actuaries, said that this particular type of contract, which was now being terminated by Continental Casualty, was actuarially unsound. So, then comes number 27, the Fireman's Fund American Life Insurance Company, which is a respectable, a strong, financially sound insurance company, headed by Mr. DesChamps. Now, the question is this, and even though the Board of Trustees had it all lined up to sign these contracts with the Continental Casualty Company, which left the lifetime benefits out and changed the premium, there was such an uproar all over the American Medical Association, not only from you people in South Carolina who have this contract, but all over the country that the Board of Trustees began to back off a little bit and they finally decided, even though they had the authority to go ahead and negotiate the contract and sign it, that they would postpone it again, to this annual session before any decision was made. So, those of you who have a contract, you still have another chance to see what can be done.

Now, the Fireman's Fund, that I spoke of, agrees to carry on the contract exactly the way that it is written at exactly the same premium. Now, the dilemma that the Board of Trustees is in, since so many people consider this an unsound program that at the end of five more years will we not be in the same position that we are in now if we go in the Fireman's Fund. There is a good deal of doubt in their minds as to whether or not the Fireman's Fund can make a go of it when the Continental Casualty can not.

However, there is also a great deal of difference in opinion, I might say their opinion, not too much actuarially, that maybe the program is not unsound because out of the premium of about thirty-one million dollars, which has been paid in to April of this year, only about five million dollars has been paid out in claims. Continental Casualty claims that the rest of that money, when you take out administrative expenses, is not even going to be enough to pay the rest of the claims which are due under those people who have now drawn three million dollars.

Now, there are 40,000 policy holders in the AMA who hold these policies. A very small percentage of those will be eligible for the lower rate, they have it sort of bracketed in ages. The younger members will get the lower rate and it seems to me that that is not exactly what group insurance is for—because younger people can get insurance at a low rate anyway. If you have a group insurance, which is any good, it is my opinion that it should be good for everybody, the young man, the middle aged man and the older man, and that is the way most of these things are set up. And it disturbs me, also, that they are going to eliminate the lifetime benefits. Those people nearing 70 can draw benefits, under the new contract, only for two years after they reach 70 years of age. So that pretty well blocks it off. There has also been some speculation that these old fellows, where I will be soon, pretty soon, are trying to make this a retirement plan—they are just going to get sick and quit—that is what they are afraid of. So, I am trying to give you just a little of the pros and cons of the whole situation. Personally, I would like to go with the Fireman's Fund for five more years and then we would have five years experience with Continental Casualty and five years with Fireman's and maybe by that time something will stabilize and we can get a good program. That is the way I personally feel about it.

Whether or not we can get the claims committee in the contract with Fireman's Fund—I don't know, that may present a stumbling block.

So, those are the pros and the cons, and what else is going to come up—new—will be given to us by special report by the Board of Trustees at our June Meeting in Atlantic City.

(Question from the floor) I would like to ask Dr. Cain a question. If we should change carriers what happens to the status of the claimants already receiving benefits under the Continental Casualty contract?

Dr. Cain: The contract with Continental Casualty does not get them out of paying their claims that are already in the course of being collected, even though they run past the five-year period. They still go on for life, that is guaranteed.

The Chair: We will now have Dr. Sosnowski's report on the Memorial Committee, Dr. Sosnowski.

(This was printed in the August *Journal*)

Dr. Johnson, Chairman State Board of Medical Examiners of South Carolina.

In 1966 the State Board of Medical Examiners held meetings on May 11th; June 6th, 7th and 8th; November 7th, 8th and 9th.

During the year the Board licensed 71 physicians by written examination and 65 physicians were licensed by endorsement of credentials. Fifty-six physicians were certified to other states. Ninety-seven temporary certificates were issued.

In 1966, seven disciplinary cases were heard by the Board, along with thirty-one reports from physicians called before the Board at previous hearings. No licenses were revoked during the year.

The current terms of Dr. Kirby D. Shealy of Columbia (2nd District) and Dr. Roderick Macdonald of Rock Hill (5th District) expire this year.

Presently there are 1955 physicians in South Carolina who are registered with the Board. A year ago there were 1914 physicians registered. The Board has prepared a summary chart of general statistics of physicians currently registered and for comparison, a chart of general statistics for 1964 is attached. (This will be published in the *Journal*)

Several members of the Board were present at the hearing before the House of Representatives' Medical Affairs Committee on the osteopath bills. We are very glad that this legislation was finally defeated in all three parts.

TUESDAY, MAY 9, 1967—9:30 A. M.

The Chair: We will now have the reports of the Reference Committees, first we will hear the reference committee report on Reports of Council and Officers, Dr. Linton.

The several reports were approved and commended. All were accepted.

The next report is the Report of the Reference Committee on Legislation and Public Relations, Dr. Wells Brabham, Chairman.

The report of the Committee on Legislative Activities as recorded in the *Journal* and the supplemental report of Dr. Donald Kilgore which consisted of three resolutions, as follows:

Resolution #1—That the House of Delegates instruct the Legislative Committee with the advice and approval of Council and Executive Secretary to prepare and introduce a bill to amend the South Carolina laws on commerce to specifically exclude blood transfusion as a commodity and designate it as a medical service.

Was approved and accepted.

Resolution #2—That the House of Delegates instruct the Legislative Committee, with the advice and approval of Council and Executive Secretary to prepare and introduce a bill to legally define the medical indications for abortions in South Carolina.

The reference committee approves this with the suggestion that the recommendations of the Maternal Health Committee of the State Medical Association be followed. This Maternal Health Committee has recently met and the following motion was carried by that body:

> "A motion was made, seconded and carried "That an advisory body be constituted to investigate the subject of sterilization and abortion with the idea of recommending changes in both laws." It was suggested that the composition of this Committee include a member of the Executive Committee of the State Board of Health, a psychiatrist

> from the Medical College and one from the State Hospital, a pediatrician and an obstetrician from the Medical College and one each representing the respective state societies, a member of the Maternal Health Committee, the Director of Maternal and Child Health, the State Bar Association, the Attorney General's office, and a physician appointed by the Governor."

The committee's recommendation for adoption was followed.

Dr. Brabham: This is a resolution which asked that the Legislative Committee be instructed with the advice and approval of council to prepare and introduce a bill. Now, this does not name the bill.

The Chair: This is just making arrangements to get it under way, is that correct?

Dr. Brabham: Yes, sir.

The Chair: Is there any more discussion?

Dr. Joe Cain, recognized: I am not sure exactly the way the resolution was amended. Wells, did you say it was recommended that we follow the advice of this potential committee which Hilla Sheriff is thinking about. My point is, don't lose sight of the fact it still has to come back to our Council before we approve it. I want to be sure that was still in there after amendment.

Dr. Brabham: That is correct. It was to cooperate with this other group rather than have two groups working on the same problem.

Dr. Brabham: The third resolution proposed by Dr. Kilgore reads as follows:

Resolution #3—That the House of Delegates support the Traffic Safety Bill now before the Legislature as a long needed method to reduce the slaughter on our highways.

This committee recommends the adoption of this resolution, and I so move.

I might add that we can't tell in detail what this bill is, but we approve in principle a bill which will improve safety on our highways.

Dr. Ford McIver: I ask this question because Dr. Brabham brought up an extremely important point. Often our intention is to support some legislative activity but when we say we 'support the bill' this puts us in a spot that we don't know what will be attached to this bill and I think some such word as he has inserted 'in principle' is a very wise precaution in general when supporting legislative activities. I would like to raise the consideration of that, having the words put in.

The Chair: Dr. Brabham, would you consider putting that in "support in principle the traffic safety bill?"

Dr. Brabham: I would approve it for my committee and if they do not object I would say "yes".

The Chair: "Support in principle the Traffic Safety Bill now before the Legislature as a long needed method to reduce the slaughter on our highways."

(The change was accepted by Dr. McIver and the Committee.)

The vote was taken and passed.

Dr. Brabham: We now come to some resolutions that came from The Charleston County Medical Society.

Charleston Resolutions 2, 3, 4, 7-A, 7-B and 8 were approved and passed.

"The resolution from the Columbia Medical Society, presented by Dr. John Holler, regarding investigation of Blue Shield by a committee composed of members of the General Assembly and appointees by the Governor, was received by this committee as information."

Dr. Bradham: We recommend no action. (Continuing)

This committee considered the resolution regarding fluoridation, asking that the South Carolina Medical Association reaffirm its stand in support of fluoridation of Public Water supplies. We approve this resolution and recommend its adoption. I so move. (This was passed)

(Dr. Brabham—cont.) This committee received two recommendations from Council, as follows:

"#1—Council recommends to the House of Delegates that the medical aspects of Title XIX (Federal matching funds for State medical programs) be under the direction of the State Board of Health. Council uregs all members of the Association to use their influence to bring this about. We recommend its adoption and I so move."

(The vote was taken and unanimously passed.)

The reports on Public Relations, Dr. Joe Waring, Chairman, The committee on Historical Medicine and of the Mediation Committee, Dr. James Wells, Chairman, were received as information.

The Chair: Dr. Brabham, thank you and your committee so much for this good report.

Gentlemen, yesterday, when the Memorial Committee report was given, the name of a very distinguished doctor in South Carolina, Dr. Paul K. Switzer, Sr., was left off and it was left off because he has died so recently, he died only a week or two ago. He was widely respected and beloved and he fulfilled the wish of most doctors by working up to within ten days or two weeks of his death. I think it appropriate at this time that we all rise and have a minute of silent tribute to Dr. Paul K. Switzer, Sr., of Union. (The House stood)

We will have the report of the Reference Committee on Public and Industrial Health, Dr. Hunter.

Dr. William H. Hunter, Chairman:

This reference committee considered the report of the Committee on Industrial Medicine, Dr. Hal Jameson, Chairman, and recommends its acceptance. We would like to particularly commend Dr. Jameson and his committee on all the hard work they did on this report and the fee schedule therein.

(This was adopted.)

"This reference committee considered the mimeographed report of the committee on Medical Services of the South Carolina Medical Association, these including: Report of the sub-committee on Emergency Medical Care, a Report on Industrial Accidents, Home

Injuries of an Orthopedic Nature, Report on Highway Safety, Report on Athletic Injuries in South Carolina, and we approve and recommend its acceptance.

This was unanimously passed.

This committee considered Dr. John H. Young's supplemental report of the South Carolina Eye Bank. We are in accord and further suggest that the Eye Bank also let the doctors know the names of donors and supply physicians in South Carolina with literature to encourage donations, and I so move, Mr. President.

(Passed.)

This committee considered the Columbia Medical Society resolution, presented by Dr. Holler, concerning funds being administered by the State Board of Health rather than the State Department of Welfare. We accept this as information and would point out that the medical administration of Title XIX by the State Board of Health has been previously brought to your attention this morning by the Reference Committee on Legislation and Public Relations.

The Annual Report of the Executive Committee of the State Board of Health was considered and accepted as information.

After careful consideration of the Scientific Program and the physicians taking part in this program of the Annual Meeting of the South Carolina Medical Association, it is the feeling of your reference committee that the committee on the scientific program should be commended for a job well done and I so move. Mr. President.

The report of the Committee on Infant and Child Care was received as information.

The report of the Committee on Maternal Health was received as information.

The Committee Report on Athletic Injuries was received as information and your reference committee is high in its praise of the work of this committee.

The report of the Advisory Committee to Vocational Rehabilitation was received as information.

The report on Drug Addiction and Alcoholism, as in the Journal, was received as information.

The report of the Advisory Committee to the Department of Public Welfare was received as information. Inasmuch as at present Title XIX is being administered by the Department of Public Welfare, appointed by the Governor, at present, it is the feeling of your reference committee that the Advisory Committee to the Department of Public Welfare maintain a close liaison between the South Carolina Medical Association and the Department of Public Welfare in the future.

The Report of the Advisory Committee to the Crippled Children's Society was received as information.

No report was available to your reference committee from the Committee on Cancer.

No report was available to your reference committee from the Committee on Mental Health.

The Columbia Resolution, presented by Dr. Tucker Weston, requesting that the terms of the members of the executive committee of the State Board of Health be staggered was received by your reference committee as information and not acted upon inasmuch as many of the details of this proposal were not available to the committee at its time of meeting. Your reference committee felt unanimously, however, that this proposal had considerable merit within its substance and we recommend that this House of Delegates ask Council to submit a plan to the House of Delegates at their next annual meeting whereby the members of the executive committee of the State Board of Health will in the future be nominated for staggered terms, and I so move, Mr. President.

(The Chair called for discussion)

The Chair: Gentlemen, I would like to add I learned this morning that election of representatives from the Medical Association to the Executive Committee of the State Board of Health is arranged by statute and there is no arrangement in our Constitution and By-Laws for that election and I presume that Dr. Hunter would want the Council to recommend, perhaps to the governor or to the Legislature that these be staggered.

Dr. Hunter: That is true. Mr. President. We were aware in our reference committee yesterday that this was a statutory thing of the laws of the State of South Carolina—we did not have the particulars to go into it at this time and it is the feeling, I think that perhaps two or three years ago these seven members were elected for seven years, and it was our feeling that it would perhaps be a better law if the members of this committee—and, as you can see, in the future, with Titles XVIII and XIX staring us in the face, with roughly 40% of the people of this state coming under that, with the State Board of Health taking more and more a part in this field of medicine, that our Executive Committee to the State Board of Health, Gentlemen, is one of the key situations that we must keep our fingers on.

It is the feeling of your committee that while the election of these seven men is three or four years away we have time for Council to study this during the year and bring back to the House of Delegates next year some plan that we would like to present to the legislature of this state and that was our explanation.

Dr. W. R. Wallace: This plan was submitted by your chairman several years ago that the executive committee or term of office be staggered. This association, this House of Delegates at that time brought to our attention or to the attention of the House of Delegates that this is a state law and that they were very much afraid at that time to submit this to legislation because of the fact that they thought we might lose our control of the appointment of the members of the executive committee. They thought many amendments would have to be brought in, in fact, the Governor states that the centers ought to be represented, and for that reason the resolution before was tabled or voted down.

Of course, last year it was brought up again—no. I beg your pardon, not last year—but anyway that is the danger. that I see after my long association with the Board of Health, that when we get into the legislature and the governor we don't know where and what will come out.

The Chair: Thank you. Dr. Wallace. Any further discussion?

Dr. Hunter: Dr. Wallace has a good point here and this is why we referred to Council, to study over the year. to bring back to this House for its own recommendation. I, personally, have been on this Title XIX Advisory Committee that has got together—this is not the official advisory committee the Governor will appoint, but it has been acting in that capacity until this committee has been appointed as liaison between the Association and the Title XIX, and we were told in no uncertain terms what the Federal Laws are about an advisory committee to this Title XIX, and the doctors on this thing are going to be badly outnumbered. There will be about three and there will be three from various fields. I think Dr. Wallace have a very good point.

Dr. Julian Price (Recognized): Mr. President. we have as our guest Dr. Milford O. Rouse, President-Elect of the American Medical Association and I have the honor to request that he be allowed the privilege of the floor without the right to vote. Dr. Rouse (Convention rises and applauds Dr. Rouse as he goes to the podium.)

Dr. Milford O. Rouse, President-Elect, of the A.M.A.:

Mr. President and speaker. I appreciate the privilege of the right without the privilege to vote that means I don't have a big responsibility and since I am to have the privilege of speaking with you during the day I will not take up your valuable time now. But it is a real pleasure to see you in action and I shall enjoy being with you and I thank you for the privilege, Mr. Speaker. (Applause)

The next report will be that of the Reference Committee on Insurance. Blue Cross-Blue Shield. Dr. Sam Cantey, Chairman.

The first resolution. the Dorchester County Resolution, regarding the presentation of a financial report of the South Carolina Medical Care Plan—the reference committee recommends that the Board of Directors of the South Carolina Medical Care Plan present to the annual corporate meeting of the plan a full presentation and discussion of a financial report of the previous year's business. I so move, Mr. President.

The Chair: Is there any discussion?

Dr. Kilgore (Recognized): This will be a printed discussion, I suppose, so that we can prepare it?

Dr. Cantey: That was the idea.

(There was no further discussion, the vote was taken. unanimously passed and it was so ordered.)

The Columbia Medical Society Resolution regarding payment of Blue Shield funds to licensed certified registered nurse anesthetists—the reference committee recommends that this resolution be rejected.

Discussion by Dr. Weston and Dr. Kilgore followed. The recommendation of the reference committee prevailed.

(There was no discussion, the vote was taken, passed with a few no votes. The chair ruled the ayes have it, and it was so ordered.)

The Charleston Resolution #9, regarding Blue Shield operation in the field of commercial health insurance—the reference committee recommends that this resolution be received as information. and I so move. Mr. President.

(There was no discussion. the vote was taken. unanimously passed and it was so ordered.)

The next report will be that of the Reference Committee on Miscellaneous Business, Dr. F. P. Owings. Chairman.

Dr. F. P. Owings (Recognized) Mr. President, Dr. Kilgore, who acted as our secretary, will give you our report.

The Chair: Thank you, Dr. Owings.

Dr. Donald G. Kilgore, Jr. Mr. President, the Reference Committee on Miscellaneous Business first considered the report of the Committee on Religion and Medicine. It was accepted as information. Dr. Anthony White of Easley. who attended the Regional Symposium on the topic "How Much Should the Patient Be Told?", suggested that a member of each county medical society be appointed to implement the South Carolina Medical Association's program on Religion and Medicine, to act as Advisor to his local Ministerial Association, and to act as liaison between the medical society and the Ministerial Association. Dr. White's suggestion was received as information.

2. The Committee considered the Resolution of the Chesterfield County Medical Society and recommends that the Benevolence Fund Committee study the feasibility of adding a voluntary contribution for the Benevolence Fund to the 1968 dues. I so move. Mr. President.

The Chair: I think everybody remembers what that

Tellers Patton, Robertson and McKee Telling

is, it is $10.00 a person for the Benevolence Fund. Is there any discussion? (There was none, the vote was taken, unanimously passed and it was so ordered.)

Dr. Kilgore: 3. Charleston Delegation Resolution No. 1: The Committee felt that the position of the Association had been stated in the past and recommended that this Resolution be accepted as information.

(There was no discussion, the vote was taken passed and it was so ordered.)

4. Charleston Delegation Resolution No. 6 concerning certification and recertification: The committee recommends adoption of this Resolution, and I so move.

(There was no discussion, the vote was taken, unanimously passed and it was so ordered.)

5. The Report of the State Board of Medical Examiners was received as information.

6. The Report of the Liaison Committee to the Department of Public Welfare on Title XIX of the Social Security Act: The Committee recommends that the last phrase of the last sentence of the second paragraph be changed from "for those families with an annual income of three thousand dollars or less," to read, "for those families with an annual income of two thousand dollors for two or more persons and twelve hundred dollars for a single person." I so move, Mr. President.

(There was no discussion, the vote was taken, unanimously passed and it was so ordered.)

The report of the South Carolina Medical Advisory Committee to Selective Service was received as information.

(The whole report was accepted.)

The Chair: Thank you, Dr. Kilgore, for you and your committee.

Gentlemen, we are honored today to have a visit from the president of the Woman's Auxiliary to the American Medical Association and I will ask her and Mrs. Linton to be escorted to the front by Dr. Hunter and Dr. Cain, two hefty escorts. The ladies were escorted to the speaker's stand while the House rises and applauds. Mrs. Yaguda then made brief remarks.

We will now have the report of the Reference Committee on Amendments to Constitution and By-Laws, Dr. W. A. Klauber, Chairman.

The first group of amendments are those which involve changes in the constitution. These are minor changes, they have been presented at last year's meeting and, therefore, they are presently qualified under the Constitution for consideration. These are small changes to portions of the Constitution which really amount to housekeeping changes of the amendments.

The first proposed change is to Article III— Component Societies. There is an addition proposed, the words "or other" are proposed. The new Article III—Component Societies shall read as follows:

Article III—Component Societies. "Component Societies shall consist of those county *or other* medical societies which hold charters from this Association."

Mr. President, this change was approved by the reference committee and I move its adoption.

(There was no discussion, vote was taken, unanimously passed and it was so ordered.)

The second proposed change, in this group, is to Article IV—Composition of the Association. It was recommended that the words "and guests" be deleted and the word "and" be added. The new Artcile IV reads as follows:

"This Association shall consist of members, honorary fellows, honorary members, *and* junior members."

Mr. Chairman, this was approved by the committee and I move its adoption.

(There was no discussion, vote was taken, unanimously passed and it was so ordered.)

The next proposed change in the Constitution is Article V—House of Delegates. We propose to add the words *"and policy-making"* under "Section 1, as well as *"and the Treasurer"* under the third division of Section 1, and adding a new section (7) *"and (7) the Delegates to the American Medical Association."*

The new amendment, then, will read as follows:

"Article V—House of Delegates. Section 1. The House of Delegates shall be the legislative *and policy-making* body of the Association and shall consist of (1) delegates elected by the component societies; (2) the Councilors; (3) the President, the President-Elect, the Vice President, the Secretary, *and the Treasurer if he is a member*, of the Association; (4) all Past Presidents of the Association whose legal residence is in South Carolina; (5) the Chairman of the Executive Committee of the State Board of Health; (6) the Chairman of the State Board of Medical Examiners; *and* (7) *the Delegates to the American Medical Association."*

(There was no further discussion, the vote was taken, unanimously passed and it was so ordered.)

Under Article VI of the Constitution entitled "Council" it is proposed that the word "seven" be deleted from the last sentence of the old article and adding *"a simple majority of the"* members of Council shall constitute a quorum. The new Artcile VI would read as follows:

"The Council shall consist of one Councilor from each of the Medical Districts of the State, the President, the Vice-President, the President-Elect, the Secretary, the Treasurer, if he is a member of the Association, the Delegates to the American Medical Association, and the President of the Board of Directors of the South Carolina Medical Care Plan. The Editor shall be an ex officio member but without the power to vote. Any member of the South Carolina Medical Association holding a high office in the American Medical Association shall be, during his term of office, an Honorary ex officio member of Council without voting privileges. The Council shall be the Finance Committee of the House of Delegates and shall perform the other duties outlined in the By-Laws. *A simple majority of the* members of Councill shall constitute a quorum."

(There was no further discussion, the vote was taken, unanimously passed and it was so ordered.)

The proposed change in Article VII— Section and District Societies. It is proposed that the word "county" be deleted and the new Article VII will read as follows:

"Article VII—Section and District Societies. The House of Delegates may provide for a division of the scientific work of the Association into appropriate Sections and for the organization of such Councilor District Societies as will promote the best interests of the profession, such societies to be composed exclusively of members of component societies."

Mr. Chairman, this is a change which was approved by the committee and I recommend its adoption.

(There was no discussion, the vote was taken, unanimously passed and it was so ordered.)

A proposed change was considered to Article VIII—of the Constitution, "Sessions and Meetings." It was proposed that the following sentence be added "*Special meetings may be held as may be provided in the By-laws.*" The new Article VIII would reads as follows:

"Article VIII—Sessions and Meetings. The Association shall hold an Annual Session during which there shall be held daily General Meetings, which shall be open to all registered members and guests. The place for holding each Annual Session shall be fixed by the House of Delegates. The time for holding the meeting shall be fixed by the Council. *Special meetings may be provided in the By-Laws.*"

(This was adopted.)

The Committee considered the recommended change in Article IX of the Constitution, headed "Officers," and it recommended that the following sentence be added "*In the event of the death of the President-Elect while in office, a successor shall be chosen as a special order of business at the beginning of the first ensuing session of the House of Delegates.*"

Section 2 of Article IX will therefore read:

"Section 2. A President-Elect shall be elected annually to serve as such until the annual meeting next succeeding his election, and he shall become President on his installation at that session and shall serve as President until the installation of his successor. *In the event of the death of the President-Elect while in office, a successor shall be chosen as a special order of business at the beginning of the first ensuing session of the House of Delegates.*"

(Passed)

"A proposed change in the Constitution of the South Carolina Medical Association was made by a Committee, the chairman of which is Dr. Joseph D. Thomas of Denmark. This proposal was considered by the Committee and was found to be an attempt at re-distributing the County Societies of the South Carolina Medical Association in such a manner that each representative of the Council would more nearly represent an equal number of physician members." (Incidentally, under this proposal the smaller counties would have a greater representation. At the present time there is a rather great inequity in the number of doctors represented by varying members of Council. Some Councilors represent at least 500 doctors, whereas, other councilors may represent less than 100.) The Committee realizes the extensive work which has been done with respect to the proposed change and commends the industry of Dr. Thomas and his group. However, it was felt that in its present form, this proposed change would disrupt present geographical distribution of the various District Societies and as such would tend to introduce more problems than solutions."

We felt that this was the only defect in the proposed change. We felt that this was a rather serious defect as there was considerable opposition to changes in the geography of the current district medical societies.

The proposed changes would follow the Congressional District approach and would allow two (2) Councilors from each Congressional District. This would reduce the number of districts from nine (9) to six (6) and it would give a net addition of three (3) members to Council. We felt, as I said before, that there was considerable merit to this proposed change, however, we felt that the geographic problems encountered, redistricting under the proposed plan, would made it inadvisable at this time and therefore the Committee recommended, reluctantly, "that this proposal be accepted as information and returned to the Committee for further consideration and proposed changes which would tend to disrupt existing boundaries less than in the current proposal."

We discussed this with Dr. Thomas and he feels that possibly he can improve on the geographical distribution so that our committee has recommended that this be returned to the committee and no action is necessary.

After much discussion, it was voted that representation in Council remain as before.

Reference Committee Report on Amendments to Constitution and By-Laws, Dr. Klauber, Chairman, Continued.

Dr. Klauber: A resolution was presented by Dr. Tucker Weston, on the floor, yesterday, however after consideration of our committee we felt that this resolution would necessitate a change in the Constitution, rather than being accomplished merely by a resolution. Dr. Weston than asked that his resolution be changed into a proposed Constitutional amendment, which of course would require an additional year before this could be acted upon by this body.

Dr. Klauber: I will now read The Resolution as proposed by Dr. Weston.

"Resolved that the Constitution and By-Laws be amended so that only the five most immediate past presidents be members of the House of Delegates with the privilege of voting. Any past president may have the privilege of the floor of the House of Delegates."

Article V, Section 1, #(4), now reads:

"All past presidents of the Association whose legal residence is in South Carolina;" be deleted, and replaced as follows:

Article V, Section 1, #4. "The five most immediate past presidents shall be members of the House of Delegates with the privilege of voting. Any past president may have the privilege of the floor of the House of Delegates."

Mr. Chairman, the committee approved this proposed change in the Constitution. I believe no action is necessary on it at this time, unless there is some discussion.

The Chair: It will lie on the table until next year unless there is some objection to it.

(The House approved this action.)

We are going to take a recess in just a few minutes, but first I would ask Miss Jo Anne Plyler to come up on the rostrum. (The young lady comes forward) We would like to present the *News & Courier* with a citation tonight for the years of devoted work that they have done in favor of the Medical profession and our medical school. Miss Plyler has to go back to work tonight unfortunately; she has been having a good time here, I think, but she has got to go back to Charleston to work and we are taking this opportunity to present to the *News & Courier*, through Miss Plyler, this citation. I would like to read it:

"The South Carolina Medical Association presents this citation to the *News & Courier* in appreciation of its continuing interest and cooperation in the publication of medical articles aimed at providing sound information to the public."

Signed: George Dean Johnson
President.

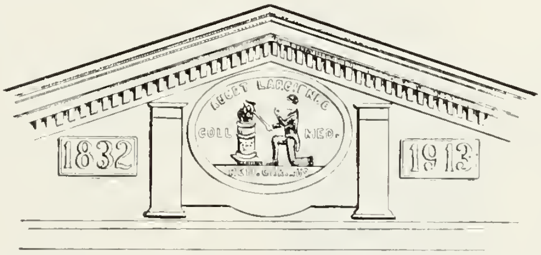
Miss Plyler, it gives me great pleasure to present this to you. (The Convention rises) (Applause)

The following officers and committee members were then nominated and elected:

President-elect—Dr. Joel Wyman
Vice President—Dr. Harrison L. Peeples
Secretary—Dr. Ben Miller
Treasurer—Dr. Howard Stokes
Delegate to the AMA—Dr. Joseph Cain
Alternate delegate—Dr. John Hawk
Councilor, 2nd District—Dr. Waitus Tanner
Councilor, 5th District—Dr. John N. Gaston
Councilor, 8th District—Dr. Harvey Atwill
Mediation Committee, 2nd District—
Dr. R. G. Latimer
Mediation Committee, 5th District—
Dr. Max A. Culp
Mediation Committee, 8th District—
Dr. John Rheney
Benevolence Fund—Dr. Wells Brabham
Medical Examiners, 2nd District—Dr. Kirby Shealy
Medical Examiners, 5th District—
Dr. Roderick Macdonald
Nurses Examiners—Dr. Charles Holmes
Hospital Advisory Committee—Dr. B. J. Workman

Dr. Ben Miller presented certificates of service to Dr. George Dean Johnson and to Dr. John Hawk.

Myrtle Beach was selected for the meeting in 1968.



MEDICAL COLLEGE OF SOUTH CAROLINA

Annual Giving Appeal

The first annual giving appeal ever made by the Medical College was scheduled to be kicked off September 15 with a mailing to physician alumni and School of Medicine faculty. Alumni of the Schools of Pharmacy, Nursing, and Graduate Studies were to be contacted beginning in October.

Funds contributed by alumni have been found to be an important source of unrestricted funds for professional schools across the country. The need for private support at the Medical College is greater than ever as a result of the increased programs and student body.

The greatest demand at this time is for unrestricted funds which can be used for projects not allocated for by state appropriations and as "seed" money for other projects before they can be regularly budgeted. Expanded medical knowledge requires expanded teaching facilities and equipment, all of which cannot be acquired by state and federal support. This new Annual Giving Program is designed to help meet that need.

Contributors will also have the opportunity to designate their gift to a special purpose. Several have been suggested on the return envelope enclosed with the mailing including research funds, scholarships, and the library fund, and others may be indicated if desired.

Contributions should be made to the Health Sciences Foundation of the Medical College of South Carolina and are tax deductible.

Dr. William McCord and Dr. Joseph Cain

Planning Grant Awarded

The Department of Health, Education and Welfare has announced the award of a supplemental planning grant to the Medical College of South Carolina for the South Carolina Regional Medical Program.

The new award of $57,621.00 will expand the planning activities of the program which were begun under an initial planning award in January of this year.

The Regional Medical Program is under the leadership of a statewide Regional Advisory Group whose members include leading physicians, hospital administrators and representatives of health organizations from every district of the state. Dr. Williiam M. McCord, president of the Medical College, is chairman of the group.

South Carolina's Regional Medical Program is under the direction of Dr. Charles P. Summerall, III, acting coordinator, and William A. Warlick, project director.

The program's initial objective is to develop a statewide plan that will help the practicing physicians of the state to provide needed services for their patients with heart disease, cancer, stroke, and related diseases.

School Opens

Convocation at the Medical College of South Carolina Thursday, September 7, brought nearly 200 new students to the first day of classes including 24 who are the state's first dental students.

Dr. Norman O. Eaddy, Sumter, president of the South Carolina Medical Association, told the nearly 800 students at the College and faculty to respect the tradition and sacrifice that had gone into making the Medical College of South Carolina a great institution. He commented on the tremendous growth of the institution since he began his studies 40 years ago when only a few professors were paid to the great complex of today.

Doctors In The News

Dr. Joseph W. Taber, Jr. has opened an office for the practice of neurology at 1513 Hampton Street, Columbia. **Dr. Donald E. Saunders, Jr.** of Columbia, a member of the Board of Directors of the S. C. Heart Association, served as chairman of the Planning Committee for the Mid-Atlantic Regional Meeting of the American Heart Association held in September at Natural Bridge, Va. **Dr. John R. Harvin** and **Dr. Charles A. James** have announced the association of **Charles G. Cannon, Jr., M. D.**, in the practice of pediatrics at 1812 Hampton St., Columbia. Gov. Robert E. McNair recently announced reappointments to the Medical Advisory Board of the S. C. Industrial Commission. Among those receiving new terms were pathologists **Dr. McKenzie P. Moore, Jr.**, Charleston and **Dr. D. James Greiner, Jr.** of Florence; radiologists, **Dr. Hyman H. Addleston**, Charleston and **Dr. J. Harvey Atwill, Jr.**, Orangeburg. **Dr. Ripon W. LaRoche** of Camden was among three reappointed in the "physicians" category. **Dr. Reed P. John-**

son has been appointed a psychiatrist at the South Carolina State Hospital. He has been assigned to the intensive treatment service. **Dr. John H. Boulware,** a Camden native, has opened his office for the practice of general medicine at 1120 B Avenue in West Columbia. **Dr. David Neville, Jr.** has associated with **Drs. Klauber** and **Tinkler** in the practice of radiology at Self Memorial Hospital. **Dr. T. J. Roper** has joined **Drs. Whitaker, Dunlap and McLane** in the practice of radiology with offices at the Greenville Medical Center. **Dr. John T. McNeely** has been named administrator of the Fairfield Memorial Hospital. **Dr. James Bruce White** has been associated with **Dr. John T. Davis** in Walhalla. Central, S. C., which is four miles from Clemson University, has launched a campaign to get a permanent town doctor. The Pickens County community has been without a resident physician since the death of **Dr. J. L. Bearden** in the mid-1950's. **Dr. Max Kent,** orthopaedic surgeon, has associated with **Drs. Orr, Hancock, Huff and Browne** in Anderson. For four months **Dr. and Mrs. Albert C. Jones, III** will be working as doctor and nurse at Montare Station, Africa. Dr. Jones is a native of Batesburg. The Columbia Medical Society was guest of the State Department of Mental Health for the August scientific meeting. **Dr. Frank J. Ayd, Jr.,** internationally-known lecturer, writer, and psychiatrist, was speaker. Six physicians have been given staff privileges by the Spartanburg General Hospital. They are **Dr. Jack Evans, Dr. William Koopman, Dr. Leslie Howard, Dr. Michael Ledford, Dr. Jasper McPhail and Dr. Robert Wootton. Dr. William S. Lang, Jr.** has opened an office for the practice of otolaryngology at 24 Vardry St., Greenville. **Dr. Vernon William Lippard,** a pediatrician and dean of the Yale School of Medicine, is heading a task force to determine South Carolina's medical college needs. **Dr. Henry B. Burton** recently resigned as director of the Greenville Mental Health Clinic. **Dr. Iverson O. Brownell** has assumed the directorship on an interim basis and **Dr. Kenneth Warren** will assume the title of administrative assistant. **Dr. Donald L. Duerk** of Myrtle Beach has been elected to active membership in the American Academy of General Practice. The 13th Tri-State Consecutive Case Conference, sponsored by the Tuberculosis Associations and Thoracic Societies of Florida, Georgia and South Carolina was scheduled at Ponte Vedra Beach for Sept. 29-Oct. 1. **Dr. Eugene Smith,** director, Pinehaven Division, Charleston County Hospital, presented a series of cases. Serving as moderators from South Carolina were: **Dr. Edward F. Parker,** Charleston, and **Dr. William H. Lee, Jr.,** chief, Division Thoracic Surgery, Medical College. **Dr. James E. Padgett** has joined the State Board of Health as assistant director of the Crippled Children's Division. He has been in private practice of pediatrics in Aiken. **Dr. William Malvray Johnson** has been assigned to the Division of Disease Control as epidemiologic intelligence service office by the U. S. Public Health Service. He will assist in epidemiologic investigations, disease surveillance and the Immunization Program.

Aces and Deuces

Dr. George Dean Johnson of Spartanburg, past president of the Association, was recently elected president of the Aces and Deuces. The Aces and Deuces is a social organization composed of delegates, alternates and executive secretaries of state medical associations which are represented by one or two members in the House of Delegates of the American Medical Association. Pictured with Dr. Johnson are, left to right, Dr. Frank J. Holroyd of Princeton, West Virginia, the secretary; Dr. Milford O. Rouse, AMA president; and Dr. Leslie A. Moren of Elko, Nevada, immediate past president.

SOUTH CAROLINA PEDIATRIC SOCIETY

A successful meeting was held at Adventure Inn, Hilton Head, on September 8-10. New officers were elected as follows: president, Charles W. Propst, M. D.; vice president, Colquitt Sims, Jr., M. D., and treasurer, Robert Gibbes, M. D.

The Society honored Dr. R. M. Pollitzer, one of its founders (1921). In a brief introduction Dr. Joseph I. Waring made the following remarks, to which a suitable response was given by Dr. Pollitzer.

At the time of the annual meeting of the South Carolina Medical Association in 1921, a small group of seven physicians started the organization of the South Carolina Pediatric Society, now 46 years old. To this nucleus additional charter members were added to make a total of twelve. They were as follows:

J. E. Watson, Anderson
R. M. Pollitzer, Charleston
Wythe M. Rhett, Charleston
William Weston, Columbia
G. C. Glover, Greenville
E. A. Hines, Seneca
H. A. Mood, Sumter
Lesesne Smith, Spartanburg
E. W. Barron, Columbia
F. K. Rhodes, Florence
M. W. Beach, Charleston
W. P. Cornell, Columbia

Dr. Cornell was elected president, and with Dr. Pollitzer was given the task of writing a constitution. From this it might be deduced that these two members had been most active in promoting the organization, since, it is customary to reward promoters with such necessary chores.

William Paterson Cornell, M. D. was born May 27, 1878 at Perth Amboy, N. J. He graduated at the Medical College of South Carolina in 1889. He served as a surgeon in the Philadelphia Troop in Cuba during the Spanish-American War.

After some years in general practice in Charleston, he took postgraduate work at the College of Physicians and Surgeons in New York and specialized in pediatrics, first in Charleston, later in Columbia, where he died in 1924.

Of Dr. Pollitzer more is to be said.

This first constitution provided for regular and associate members, noted that three absences from meetings automatically ended membership, set up dues of $2.00 and stated that one of the purposes of the Society was the education of the laity. This old and neglected provision gives the speaker a logical opening for a plea that the present members assist him in promoting this endeavor by providing material for the Public Information Column that the Medical Association contributes to our newspapers.

In 1922 all physicians interested in pediatrics were invited to join, and the membership rose to 39. The size of the Society has varied and sometimes it has carried on with little more than a corporal's guard. Now its activities seem firm, both scientifically and otherwise.

I have not consulted the surviving minutes for the full story. I did come across a report of the meeting of 1937, thirty years ago in Columbia, when Dr. William Weston was president, Dr. Lesesne Smith was secretary-treasurer and Dr. Isaac Abt spoke on the History of Vitamins.

I should be silent in the presence of one of our founding fathers, who can tell far more of the Society than I can. I knew him as a teacher, when I was a student, and I have known him with pleasure ever since. He was born in Charleston, "some time before the Spanish-American War," as he puts it, was educated in Charleston at the College of Charleston and the Medical College of South Carolina. He then served as intern at Roper Hospital, afterward entering practice in Charleston, at first using a bicycle as a means of transportation. Regularly he attended postgraduate courses, and later served as house officer at Children's Hospital in Boston and at the Boston City Hospital. Later still he was to study pediatrics in Europe.

After his Boston experience he began practice in Charleston as a pediatrician, the third in the state, and served through the ranks at the Medical College up to the position of full professor. In 1924 he moved to Greenville, where he now lives in mellow semi-retirement.

It is my sincere pleasure to introduce a man who has loomed large in the progress of pediatrics in South Carolina, Dr. Richard M. Politzer, who is with us tonight as an honored guest.

Blue Cross - Blue Shield of South Carolina

Important Changes and Additions to Contracts

Effective October 1, 1967, several important changes and additions to Blue Cross and Blue Shield Contracts became effective.

Members 65 and Over Offered Choice of Contracts

For members 65 years of age and over, a choice of contracts for both Blue Cross and Blue Shield is offered to fit the individual's needs or choice. These are as follows:

BLUE CROSS 65: This contract is for those persons over 65 who wish to use Medicare Part A in a Medicare eligible hospital. Benefits payable under this contract include the deductible, co-insurance from the 61st to 90th day, and difference in private and semi-private room.

BLUE CROSS PERSONAL PAY: This coverage is for a person over 65 who does not wish to use Medicare Part A or plans to use a non-Medicare eligible hospital. This Plan provides regular Blue Cross benefits, including room and board (ward) paid in full for 70 days a year; emergency room care; out-patient surgery; miscellaneous hospital services; and benefits in a skilled nursing home.

BLUE SHIELD PERSONAL PAY $325: This Plan is for persons who are covered by Part B of Medicare. It pays regular benefits without regard to payments made by Medicare. This includes a maximum allowance of $325.00 for surgery according to a fee schedule; anesthesia; medical care for 70 days—$5.00 per visit beginning the first day; emergency medical care and x-ray, and medical care in a skilled nursing home.

BLUE SHIELD 65: If a person over 65 elects not to carry Medicare Part B, the Blue Shield 65 Plan is offered as an alternate to Medicare medical coverage. Benefits include a maximum allowance of $325 for surgery according to a fee schedule; anesthesia; medical care—($9.25 for the first day, $6.25 for the second day, and $3.00 per day thereafter up to 70 days per admission), emergency medical care, diagnostic and emergency x-ray; radiation therapy, laboratory and pathology, intensive medical care, concurrent medical care, and medical care in a skilled nursing home.

Note: Service benefits are a feature of all of the above plans.

Increase in Benefits in Blue Shield Contracts at No Added Cost

In order to give more adequate protection for health care to the citizens of South Carolina, and to provide the physician more payment for services rendered, Blue Cross-Blue Shield is providing increased benefits and upgrading coverage under certain contracts.

All Blue Shield contracts which presently have the $250 fee schedule will be upgraded to the $325 fee schedule. The $4.00 per visit in-hospital medical allowance beginning on the third day will be increased to $5.00 per visit beginning the first day. All Blue Shield contracts which now have the $325.00 fee schedule will have added to their coverage $5.00 per visit in-hospital medical allowance beginning on the first day of confinement, instead of the third day, which is now the case. No increase in dues will be made at the present time for these additional benefits.

Benefit changes for regular South Carolina Blue Shield contracts were made automatically on October 1. Benefit changes for some special Blue Shield contracts will be made pending individual negotiations with these groups.

ON MEDICAL ETHICS

HAROLD E. JERVEY, JR., M. D.

Columbia, S. C.

The ethics of individuals as well as such august bodies as the Congress of the U. S. A. and the South Carolina legislature have recently been receiving much publicity. Serious discussions regarding the need for a code of ethics for these and other groups are taking place. We, in medicine, have a code of ethics of which we can be justly proud. However, our critics maintain that we are hypocrites, citing case after case purporting to show that the code is being flouted and paid only lip service. Facts would indicate that they exaggerate their claims and in reality only a small minority of physicians are delinquent. However, it is essential that we recognize, accept, and make a determined effort to improve our public image even if the culprits are few in number. One of the major groups of unethical physicians is the uninformed—that group which has never received the message, or have not even read the code of ethics. State Boards of Medical Examiners and Grievance Committee members have first hand knowledge of the difficulties that physicians can get into through ignorance.

Facts obtained from a survey of all medical schools in 1960 and two years' detailed investigation with the AMA Disciplinary Committee clearly established that medical educators failed to recognize their responsibility, or the need for greater emphasis in this vital area. Only fourteen schools attempted to present formal lectures in ethics. The AMA House of Delegates in 1961 in an attempt to elevate the ethical standards of the profession adopted the following proposals and in theory they are now in effect:

(1) Every medical school is urged to present a required course in ethics.

(2) The Joint Commission on Accreditation of Hospitals is urged to adopt as a requirement for accreditation, the giving of an adequate course in ethics each year.

(3) State Boards of Medical Examiners should include in all examinations for licensure questions on ethics.

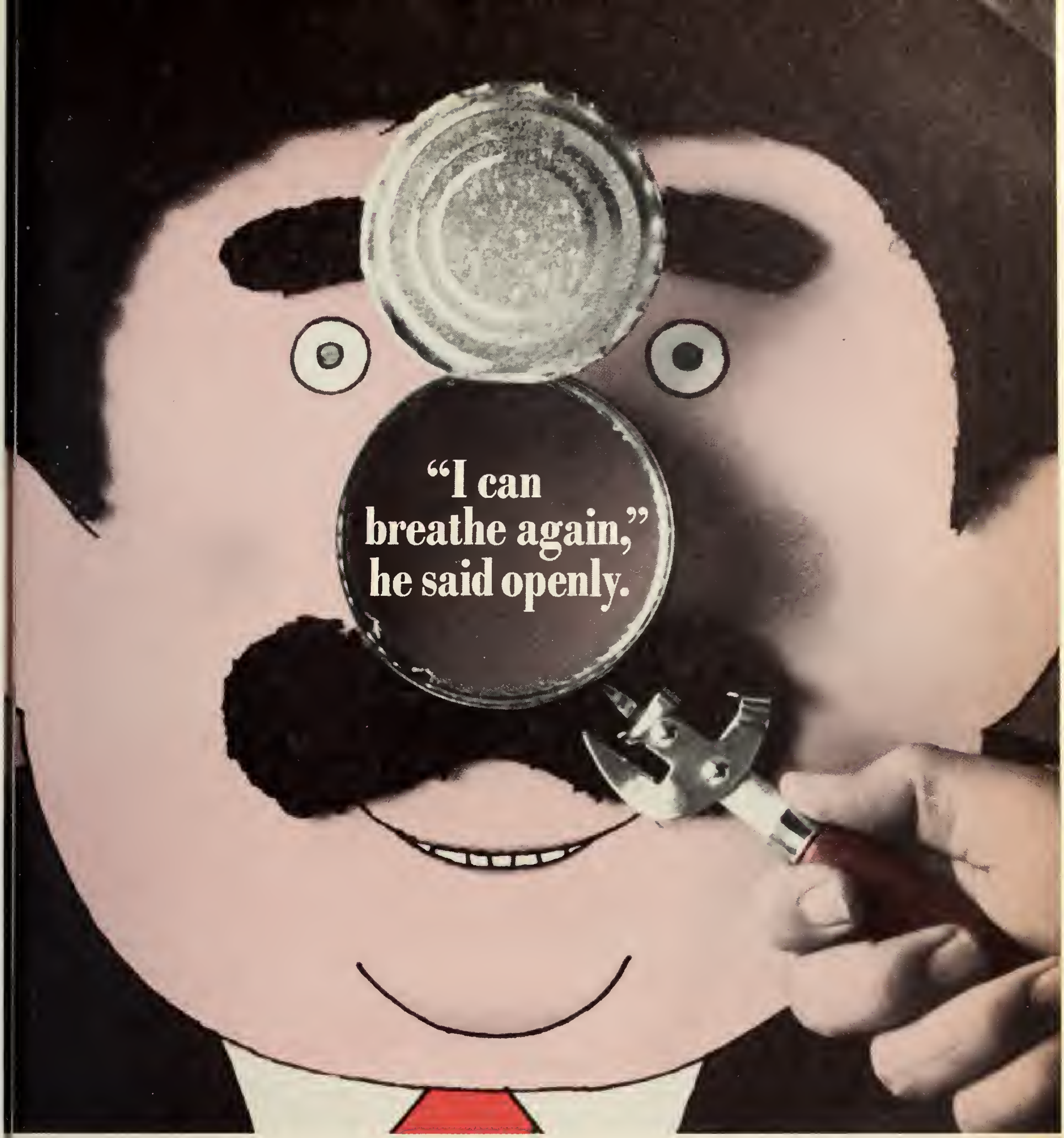
(4) State Medical Societies should develop indoctrination programs for use by county societies to acquaint new members with ethical principles.

(5) The AMA is directed to distribute annually to all senior medical students copies of the *Principles of Ethics* and the *Opinions and Reports of the Judicial Council.*

(6) Two proposals directed to the State Boards of Medical Examiners, medical schools and medical societies urging them to cooperate with each other to the end that the students and practicing physicians might be better informed.

(7) The AMA is directed to prepare a lecture guide on the subject for the use of physicians called upon to give lectures in hospitals, medical schools, or before medical societies.

Another survey taken in 1965 clearly established that little had been done to place these recommendations into effect. The prevailing opinion of the medical educators remained unchanged. "This subject can best be learned by precept and example—through a process of osmosis." With the discovery of DSMO it has been suggested that some might be rubbed on the professors and have the students lean on them one hour a week to facilitate the process. It would be as sensible as the approach now


"I can breathe again," he said openly.

in sinusitis, colds, U. R. I.

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(Dimetane® [brompheniramine maleate], 12 mg.; phenylephrine HCl, 15 mg.; phenylpropanolamine HCl, 15 mg.)

up to 10-12 hours clear breathing on one tablet

It's clear—Dimetapp lets your "stuffed-up" patients breathe easy again. Each hard-working Extentab brings welcome relief from the stuffiness, drip and congestion of upper respiratory conditions for up to 10-12 hours. Yet, patients seldom experience drowsiness or overstimulation. Its key to success is the Dimetapp formula: Dimetane (brompheniramine maleate)—along with phenylephrine and phenylpropanolamine, two time-tested decongestants. They get the job done...in a hurry.

Contraindications: Hypersensitivity to antihistamines. Not recommended for use during pregnancy. **Precautions:** Until patient's response has been determined, he should be cautioned against engaging in operations requiring alertness. Administer with care to patients with cardiac or peripheral vascular diseases or hypertension. **Side Effects:** Hypersensitivity reactions including skin rashes, urticaria, hypotension and thrombocytopenia have been reported on rare occasions. Drowsiness, lassitude, nausea, giddiness, dryness of the mouth, mydriasis, increased irritability or excitement may be encountered. A. H. ROBINS COMPANY, Richmond, Virginia 23220
Dosage: 1 Extentab morning and evening. **Supplied:** Bottles of 100 and 500.

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Preludin® phenmetrazine hydrochloride

For complete details,
please see full
Prescribing Information.

helps keep calories at arm's length

Preludin is indicated only as an anorectic agent in the treatment of obesity. It may be used in simple obesity and in obesity complicated by diabetes, moderate hypertension, or pregnancy. For use in pregnancy, see Warning.

Dosage: One 25 mg. tablet b.i.d. or t.i.d. Or one 75 mg. Endurets® prolonged-action tablet a day, taken by midmorning.
Contraindications: Severe coronary artery disease, hyperthyroidism, severe hypertension, nervous instability, and agitated prepsychotic states. Do not use with other CNS stimulants, including MAO inhibitors.

Warning: Do not use during first trimester of pregnancy unless potential benefits outweigh possible risks. There have been clinical reports of congenital malformation, but causal relationship has not been proved. Animal teratogenic studies have been inconclusive.
Precautions: Use with caution in moderate hypertension and cardiac decompensation. Cases involving abuse of or dependence on phenmetrazine hydrochloride have been reported. In general, these cases were characterized by excessive consumption of the drug for its central stimulant effect, and have resulted in a psychotic illness manifested by restlessness, mood or behavior changes, hallucinations, or delusions. Do not exceed recommended dosage.
Side Effects: Dryness or unpleasant taste in the mouth, urticaria, overstimulation, insomnia, urinary frequency or nocturia, dizziness, nausea, or headache. (B)R46-560-A

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even in ulcerative colitis...

characterized by:
- diarrhea, cramps, tenesmus
- bloody, mucoid, purulent stools

LOMOTIL® tablets/liquid

Each tablet and each 5 cc. of liquid contains:
diphenoxylate hydrochloride . . . . 2.5 mg.
(Warning: May be habit forming)
atropine sulfate . . . . 0.025 mg.

controls diarrhea

In six published studies$^{1\text{-}6}$ detailed results are given on the use of Lomotil in 111 patients with chronic ulcerative colitis. They show that Lomotil gave satisfactory to "excellent" control of diarrhea in more than two-thirds of these patients. As the disorder advances and destroys bowel musculature, the motility-lowering action of Lomotil, understandably, has less effect.

The successful use of Lomotil in a disorder as exceedingly difficult to treat as moderate ulcerative colitis emphasizes again its unsurpassed antidiarrheal effectiveness in these more common conditions:

- **Gastroenteritis**
- **Acute infections**
- **Spastic colon**
- **Drug induced diarrhea**
- **Functional hypermotility**

For correct therapeutic effect
Rx correct therapeutic dosage

Dosage: The recommended initial daily dosages, given in divided doses until diarrhea is controlled, are:

Children: Total Daily Dosage

3-6 mo. . .	½ tsp.* t.i.d. (3 mg.)
6-12 mo. .	½ tsp. q.i.d. (4 mg.)
1-2 yr. . . .	½ tsp. 5 times daily (5 mg.)
2-5 yr. . . .	1 tsp. t.i.d. (6 mg.)
5-8 yr. . . .	1 tsp. q.i.d. (8 mg.)
8-12 yr. . .	1 tsp. 5 times daily (10 mg.)
Adults:	2 tsp. 5 times daily (20 mg.) or 2 tablets q.i.d.

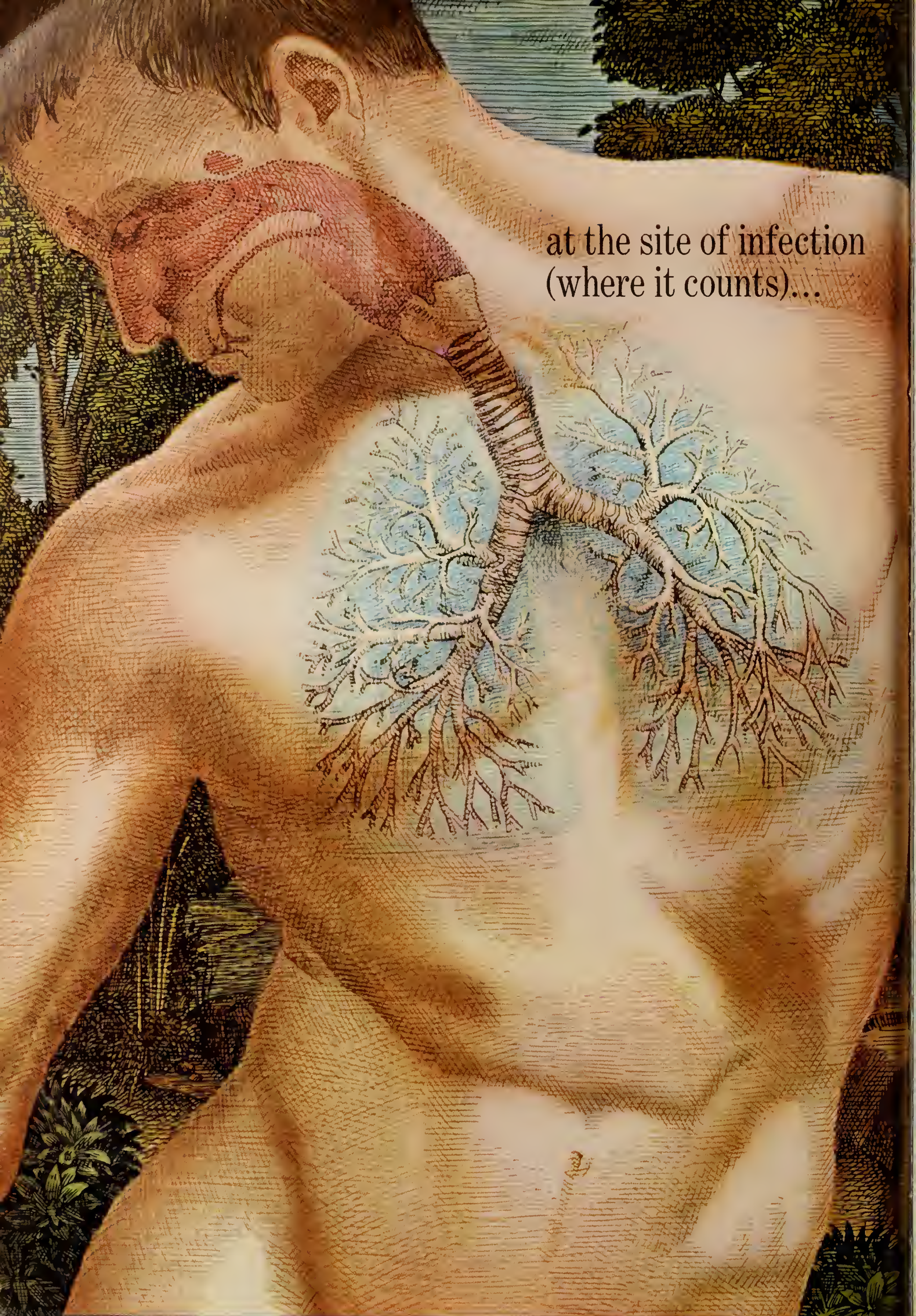
*Based on 4 cc. per teaspoonful.
Maintenance dosage may be as low as one-fourth the initial daily dosage.

Precautions: Lomotil is a federally exempt narcotic preparation of very low addictive potential. Recommended dosages should not be exceeded, and medication should be kept out of reach of children. Should accidental overdosage occur signs may include severe respiratory depression, flushing, lethargy or coma, hypotonic reflexes, nystagmus, pinpoint pupils and tachycardia. Lomotil should be used with caution in patients with impaired liver function or those taking addicting drugs or barbiturates.

Side Effects: Side effects are relatively uncommon but among those reported are gastrointestinal irritation, sedation, dizziness, cutaneous manifestations, restlessness, insomnia, numbness of the extremities, headache, blurring of vision, swelling of the gums, euphoria, depression and general malaise.

1. Barowsky, H., and Schwartz, S. A.: J.A.M.A. *180:*1058-1061 (June 23) 1962. 2. Cayer, D., and Sohmer, M. F.: N. Carolina Med. J. 22:600-604 (Dec.) 1961. 3. Hock, C. W.: J. Med. Ass. Georgia *50:*485-488 (Oct.) 1961. 4. Van Derstappen, G., and Vandenbroucke, G.: Med. Klin. *56:*962-964 (June 2) 1961. 5. Merlo, M., and Brown, C. H.: Amer. J. Gastroent. *34:*625-630 (Dec.) 1960. 6. Weingarten, B.; Weiss, J., and Simon, M.: Amer. J. Gastroent. *35:*628-633 (June) 1961.

SEARLE *Research in the Service of Medicine*


at the site of infection
(where it counts)...

Ilosone® provides more antibacterial activity than any other oral erythromycin

Acid stable, better absorbed . . . Ilosone produces faster, higher, more prolonged blood levels, even in the presence of food[1-3]

Because it is the most active form of oral erythromycin, Ilosone can help assure consistently greater antibacterial activity at the site of infection. Ilosone produces peak antibacterial blood levels two to four times those of other erythromycin preparations.[1,2] Not only are these levels attained earlier, but they are maintained for much longer periods. Even the presence of food does not seem to affect the activity of Ilosone.[1,3]

In the treatment of patients with bacterial infections susceptible to erythromycin, Ilosone has compiled an excellent therapeutic record. Since it exerts its greatest activity against gram-positive organisms, it is particularly useful in common respiratory and soft-tissue bacterial infections. Ilosone kills—not merely inhibits—streptococci, pneumococci, and more strains of staphylococci than any other macrolide antibiotic. This bactericidal action, coupled with the high antibacterial levels attained, makes Ilosone especially valuable in patients with low host resistance, such as infants, debilitated individuals, and diabetics.

Ilosone has shown no cross-resistance with penicillin and may be effective against organisms that have become resistant to that agent. Despite its high antibacterial activity, Ilosone has demonstrated a low incidence of side reactions. Blood dyscrasias, ototoxicity, and tooth staining have not been observed. Infrequent cases of drug idiosyncrasy, manifested by a cholestatic jaundice, have occurred, but there have been no known definite residual effects.

Now available:
New! Ready-mixed Ilosone Liquid 125! (Contains erythromycin estolate equivalent to 125 mg. erythromycin base per 5-cc. teaspoonful.)

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Erythromycin Estolate

Lilly

(See next page for prescribing information.)

Ilosone®/the most active oral form of erythromycin

Description: Ilosone is the most active form of oral erythromycin that has been developed. Because it is stable in acid, well absorbed, and excreted in lesser amounts in the bile, it provides faster, higher, and longer-lasting levels of antibacterial activity (ABA) in the serum, even when taken with food, than do comparable doses of erythromycin.

Indications: Ilosone is indicated in infections caused by microorganisms sensitive to its action (especially staphylococci, hemolytic streptococci, and pneumococci). The drug is therefore useful in a high proportion of bacterial diseases encountered in clinical practice and particularly in the treatment of bacterial infections of the upper and lower respiratory tract and soft tissues.

In the treatment of acute bacterial pharyngitis and tonsillitis, this antibiotic has promptly eradicated the bacteria (streptococci) and has produced a parallel prompt clinical improvement. There have been no group A beta-hemolytic streptococci resistant to this preparation. In beta-hemolytic streptococcus infections, treatment should be maintained for ten days to prevent the development of rheumatic fever or glomerulonephritis.

Erythromycin estolate has proved to be very effective in pneumococcus pneumonia and in acute bronchitis with pneumococci on culture. Bronchopneumonia and otitis media in children have responded well to its use.

The antibiotic has been used very successfully in staphylococcus infections. Good therapeutic results have been obtained in soft-tissue infections, abscesses, cellulitis, carbuncles, wound infections, and furunculosis.

In serious staphylococcus infections, erythromycin preparations should be used only in combination therapy with other antimicrobial agents. As is the case with any treatment regimen used in these severe conditions, surgical procedures should be performed when indicated, and large dosages of the antimicrobial agents should be employed. In this fashion, Ilosone has been effective in staphylococcus pneumonia, osteomyelitis, septicemia, empyema, and meningitis.

Multiple 500-mg. doses of the drug have also been useful in gonorrhea and syphilis. Since penicillin is the drug of choice for the treatment of syphilis and gonorrhea, erythromycin estolate should be employed for these infections only in patients with a history of penicillin allergy. Also, other infections due to susceptible bacteria in patients known to be hypersensitive to penicillin or other antibiotics may be considered for treatment with Ilosone.

Contraindications: Ilosone is contraindicated in patients with a known history of sensitivity to this drug and in those with preexisting liver disease or dysfunction.

Adverse Reactions: Data obtained from seven years' use of propionyl erythromycin ester and erythromycin estolate (Ilosone) indicate that hepatic dysfunction with or without clinical jaundice may occur during or following courses of therapy with the drug.

Changes in liver function tests in such cases have been indicative of intrahepatic cholestasis. The symptoms appear to be the result of a form of sensitization. The initial symptoms have developed in some cases after a few days of treatment but generally have followed one or two weeks of continuous therapy or several courses of the drug. Symptoms reappear promptly, usually within forty-eight hours, if the drug is readministered to sensitive patients. Eosinophilia was noted in peripheral blood counts. The findings readily subsided without apparent residual effects when treatment was discontinued. Recovery was delayed in one reported instance. The physician indicated in this case that either drug-induced jaundice or viral hepatitis may have been responsible for the findings.

In one clinical study involving ninety-three patients treated with the antibiotic, three cases of jaundice were observed and an additional eleven cases developed some changes in liver function tests. Three of the patients had abnormal liver function tests a second time on readministration of the drug.

Even though it is assumed that not all cases of jaundice have been reported, it seems clear that the number is small compared with the amount of drug that has been used. Reported cases have included persons in whom there had been administered other drugs known to be associated at times with hepatic side-effects and cases in which the presence of viral hepatitis or other disease may have been responsible for the findings. In some of the cases, associated gastro-intestinal symptoms simulated the colic of biliary tract disease. In other instances, clinical symptoms and results of liver function tests resembled findings in extrahepatic obstructive jaundice. It appears that the occurrence of jaundice after administration of Ilosone is infrequent, but further investigations are being made to estimate its incidence more accurately.

In those cases mentioned above in which jaundice appeared to be definitely related to use of the drug, laboratory findings were characterized by increased direct-reacting bilirubin, elevated alkaline phosphatase levels, negative or weakly positive cephalin flocculation and thymol turbidity tests, elevated serum glutamic oxalacetic transaminase levels, peripheral eosinophilia, and normal cholecystograms.

Individual idiosyncrasy seems evident since jaundice has not been reported in other patients taking prolonged courses of the medication. Patients with chronic infection have been given 1 to 2 Gm. of the drug daily for periods of two to six months, and patients with rheumatic fever have taken prophylactic doses of 0.5 Gm. daily for two years without difficulty. In one group of 144 patients who received the drug daily for two years, no jaundice was noted. It was of interest that members of six of these patients' families, who were not taking the drug, had episodes of jaundice during the study period.

Transaminase and serum alkaline phosphatase levels were determined in a group of fifty-four adults and children who took 250 mg. of Ilosone daily for an average of sixteen months as rheumatic fever prophylaxis. The results were compared with those of a similar group of forty-four patients who received penicillin. There were no cases of jaundice in either group. Elevation of SGPT and serum alkaline phosphatase levels during the course of treatment was observed in one patient treated with Ilosone and in two patients treated with penicillin. Seven other patients in the group receiving Ilosone and four others in the penicillin group showed elevations in one of the tests at some time during administration of the drugs.

Very satisfactory therapeutic results, without toxicity, were reported in 102 pediatric patients who received short-term (ten-day) courses of Ilosone in the treatment of streptococcus infections. Results of liver function tests in these patients were comparable to those in a similar control group who had received penicillin.

Gastro-intestinal disturbances not associated with hepatic effects are observed in a small proportion of individuals as a result of a local stimulating effect of the medication on the alimentary tract; however, the normal intestinal gram-negative bacterial flora is not appreciably altered by erythromycin drugs.

Although allergic manifestations are uncommon with the use of erythromycin, there have been occasional reports of urticaria, skin eruptions, and, on rare occasions, anaphylaxis.

Administration and Dosage: Ilosone is administered orally.

Ilosone Pulvules®, Ilosone Liquid 125, Ilosone, 125, for Oral Suspension, Ilosone Drops, Ilosone Chewable Tablets.

For infants and for children under twenty-five pounds of body weight, the usual dosage is 5 mg. per pound every six hours; for children twenty-five to fifty pounds, 125 mg. every six hours. (Tablets Ilosone Chewable should be chewed or crushed and swallowed with water.)

For adults and for children over fifty pounds, the usual dosage of Ilosone is 250 mg. every six hours.

For severe infections, these dosages may be doubled.

When larger doses are indicated, parenteral erythromycin therapy should be considered.

In the treatment of syphilis, the recommended total dosage is 20 to 30 Gm. given in divided doses for a period of ten to fifteen days. Close follow-up of the patient is necessary since erythromycin drugs have not had adequate evaluation in all stages of syphilis. Examinations of spinal fluid are recommended as part of the follow-up therapy.

For gonorrhea, 500 mg. four times a day for four days are recommended. In the treatment of gonorrhea, patients with a suspected lesion of syphilis should have a dark-field examination before receiving antibiotics, and monthly serologic tests should be made for a period of three months.

How Supplied: Pulvules Ilosone, Capsules, N.F., 125 and 250 mg. (equivalent to base), in bottles of 24 and 100.

Ilosone Liquid 125, Oral Suspension, U.S.P., 125 mg. (equivalent to base) per 5-cc. teaspoonful, in 60-cc. and pint-size packages.

Ilosone, 125, for Oral Suspension, N.F., 125 mg. (equivalent to base) per 5-cc. teaspoonful, in 60 and 150-cc.-size packages.

Ilosone Drops, 5 mg. (equivalent to base) per drop, in 10-cc.-size packages, with dropper calibrated at 25 and 50 mg.

Tablets Ilosone Chewable, N.F., 125 mg. (equivalent to base), in bottles of 50. [032767]

References: 1. Griffith, R. S., and Black, H. R.: Am. J. M. Sc., *247:*69, 1964. 2. Griffith, R. S., and Black, H. R.: Antibiotics & Chemother., *12:*398, 1962. 3. Hirsch, H. A., Pryles, C. V., and Finland, M.: Am. J. M. Sc., *239:*198, 1960.

Additional information available to physicians upon request.
Eli Lilly and Company, Indianapolis, Indiana 46206.

Lilly

70097

being used. All informed medical leaders agree that there is a need for formal lectures, that exposure should be required and that it be a continuing process. The interpretation of the code of ethics is not static, but dynamic. Changing conditions require different attitudes. Study is just as necessary here as in any other area of medicine.

Unfortunately until the doctors become educated little progress can be made. Not only is there an urgent need to teach ethics, but improved screening and weeding methods are essential to assure the graduation of ethically oriented phyicians. More emphasis should be placed on the Character Quotient and less on the IQ. A typical example is the student with the personality disorder or the psychopath. In our more enlightened institutions when these defects are displayed, the student is directed to obtain psychiatric treatment, limp through on the crutches provided and then thrust out on the public and profession. Experience has shown repeatedly that these individuals seldom stay out of trouble. The deans just do not understand that the medical profession does a pretty good job of developing a sufficient number of psychopaths without active assistance from the medical colleges. This is only one example; many others could be cited.

If ignorance is to be eliminated as a cause for deterioration of ethical standards then increased emphasis by the medical schools, improved teaching methods and definitive action by the state boards of medical examiners are essential. Fifty years ago this latter group upgraded medical education by raising the standards required for licensure. Today they have the opportunity to do the same thing in the field of ethics. If each board requires that every applicant demonstrate adequate knowledge in ethics before being licensed the schools will have no alternative but to prepare their students. This action would infuse the whole subject with new life. It might even spur some medical researcher with money in hand, but no project, to make a cradle to the grave study of the unethical physician. Hundreds of case histories are available. Certainly this would be more rewarding to the public than $8,700 grant given to a California professor for a study of the history of comic books. The S. C. Board has taken the first step and notified all medical colleges that starting this year applicants for licensure will be examined in medical ethics. Considerable interest has already been shown by several other boards. Perhaps this will clearly demonstrate to the public that the profession is concerned and intends to do something about elevating its standards. There is a deep desire to refute the critic that maintains that the medical profession stands before the world as the sincerest best documented, most intelligent group of hypocrites of all times. The medical schools have had five years in which to show some understanding and interest. The progress made can only be measured in millimeters. If this task is to get done before man lands on Mars, it is obvious that the state boards will have to lead the way. It is to be hoped that the rank and file of the profession will give them their support.

Federation Bulletin 54:4 (Jan. 1967)

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50 YEARS AGO

The Journal of the South Carolina Medical Association

October, 1917

The Spartanburg Hospital and the Good Samaritan Hospital were to be merged, and a General Hospital costing $200,000 was to be erected with tax money.

Pediatric Fellowship Forms Available

Applications for Pediatric Followships sponsored by the Wyeth Fund for Postgraduate Medical Education are now available for residencies.

The $4,800 fellowships provide for a two-year period of advanced training required for board certification in pediatrics. Interns, physicians who have recently completed internship, research Fellows, or physicians completing their tour of duty with the armed services or the U. S. Public Health Service may apply. Applications should be sent to Dr. Philip Barba at 120 Erdenheim Rd., Philadelphia, Pa. 19118.

The 14th annual combined Sectional Meeting for doctors and nurses sponsored by the American College of Surgeons will be held in Williamsburg, Va., March 11-13.

The AMA's 21st Clinical Convention will be held in Houston at the Astrohall November 26-29. The complete scientific program, plus forms for advance registration and hotel accommodations will be featured in JAMA, October 23.

The American College of Physicians will present Neurologic Aspects of Internal Medicine, November 15-18 at Duke University Medical Center, Durham.

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Membership Brings You These Benefits

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SOUTH CAROLINA
Independent Laboratories
Approved under Medicare Program

Identification Number	Name and address of Provider	Date number assigned
42-8000	Drs. Dreskin, Kilgore, Water & Cox Laboratories 11 Sumner Street Greenville, South Carolina	2/24/67 Specialties Approved— 08
42-8001	Physicians' Clinical Laboratory 1919 Hampton Street Columbia, South Carolina	4/13/67 Specialties Approved— 08
42-8002	Physicians' Clinical Laboratory 109 Dotson Street Rock Hill, South Carolina	4/13/67 Specialties Approved— 08
42-8003	Medical Arts Laboratory 65 Gadsden Street Charleston, South Carolina	4/13/67 Specialties Approved— 02, 03, & 04

LEGEND OF SPECIALTIES APPROVED

01—microbiology
02—serology
03—clinical chemistry
04—hematology
05—immunohematology
06—tissue pathology
07—exfoliative cytology
08—all (clinical)

Procedures in serology and Rh typing and blood grouping are classified as subspecialties of microbiology and hematology.

Deaths

Dr. Louis S. Miles

Dr. Louis Smith Miles of Summerville died September 13.

Dr. Miles was born in Charleston, December 11, 1901, a son of Dr. John Allen Miles and Mrs. Roberta Lawrence Hall Miles. He was a general practitioner for 36 years and was a member of St. Paul's Protestant Episcopal Church.

Dr. Miles was a lieutenant colonel in the Army Medical corps during World War II. He was a graduate of Porter Military Academy, attended the College of Charleston and graduated from the Medical College of South Carolina in 1928. He served as assistant to the head of anatomy at the Medical College for about a year then began general practice at Mullins in 1930 and had practiced in Summerville from 1931 until his retirement this year.

He was chief of staff of the Dorchester County Hospital for 25 years and was a member of the Medical Society of South Carolina, the Charleston County Medical Society, and the South Carolina Medical Association, the "Widows and Orphans Society," the Huguenot Society of South Carolina, the South Carolina Historical Society, the Charleston Preservation Society and the Sons of the American Revolution. A graduate of the Sweeney Automobile School, he was also a member of the Washington Light Infantry, the Horological Society, Summerville Masonic Lodge No. 234 and the Summerville Lions Club.

Dr. George Thomas McCutchen

Dr. George Thomas McCutchen, 58, surgeon of Columbia, died September 12 in Georgetown Hospital after suffering a heart attack at Pawley's Island.

He was born in Columbia, and was a graduate of the University of South Carolina and the Medical College of South Carolina, where he was a member of Alpha Kappa Kappa Fraternity. He began practicing in Columbia as an associate of the late Dr. LeGrande Guerry, Columbia surgeon. During World War II he served in the Medical Corps as a Lieutenant Colonel.

Dr. McCutchen was a member of the Columbia Medical Society, the S. C. Medical Association, the American Medical Association, the Medical History Club, the Southeastern Surgical Association and the Columbia Rotary Club. He was also a fellow of the American College of Surgeons, a member of the staff of surgeons with the Baptist Hospital, the Columbia Hospital and the Providence Hospital; he also served as consulting surgeon with the Veterans Administration Hospital and the S. C. State Hospital.

Dr. McCutchen was past president of the Columbia Medical Society, the S. C. College of Surgeons, the S. C. Surgical Society, the Southern Society of Clinical Surgeons and past vice-president of the Southern Surgical Association.

Dr. Homer Jackson Hancock

Dr. Homer Jackson Hancock, 58, Anderson surgeon, died August 5 in Anderson Memorial Hospital.

A native of Sedley, Va., Dr. Hancock attended William and Mary College at Williamsburg, Va., and received his M. D. degree from the University of Virginia Medical College. He entered the army prior to the beginning of World War II and served in the Medical Corps for the duration of that conflict.

Following his separation from the service he specialized in surgery at Bowman Gray Medical College and served his residency in surgery at Bowman Gray Hospital.

He came to Anderson in the early 1950's and became associated with Dr. C. Wilson Orr in practice of surgery.

He was a member of the American College of Surgeons, the Anderson Medical Society, the South Carolina Medical Association, the American Medical Association and was a Diplomate of the American Board of Surgery. He also was a member of the Anderson Elk's Lodge and of the Anderson Country Club. He attended Grace Episcopal Church.

New Pharmaceutical Specialties

by Paul De Haen

For detailed information regarding indications, dosage, contraindications and adverse reactions, refer to the manufacturer's package insert or brochure.

Single Chemicals—Drugs not previously known, including new salts.

Duplicate Single Products—Drugs marketed by more than one manufacturer.

Combination Products—Consisting of two or more active ingredients.

New Dosage Forms—Of a previously introduced product.

NEW SINGLE CHEMICALS

ATROMID-S

Cholesterol reducing agent. Rx

Manufacturer: Ayerst Laboratories

Nonproprietary Name: Clofibrate

Indications: Reduction in serum lipids in hypercholesterolemia and/or hypertriglyceridemia.

Contraindications: Impaired renal or hepatic function, during pregnancy and lactation. Not to be used in children.

Dosage: One capsule q.i.d.

Supplied: Capsules—500 mg; bottles of 100.

DUPLICATE SINGLE PRODUCTS

AMPHICOL

Antibiotics—B & M Spectrum. Rx

Manufacturer: McKesson Laboratories

Nonproprietary Name: Chloramphenicol

Indications: Serious infections caused by organisms which are susceptible to it.

Contraindications: Not to be used for trivial infections such as colds, influenza, or infections of the throat, or as a prophylactic agent to prevent bacterial infections.

Dosage:

Adults—50 to 100 mg/kg/day in divided doses at 6 hour intervals.

Children—50 mg/Kg/day divided into 4 doses at 6 hour intervals.

Infants—25 mg/Kg/day divided into 4 doses at 6 hour intervals.

Supplied: Capsules—100 and 250 mg; bottles of 100 and 1000.

DUPLICATE SINGLE PRODUCTS

KESSO-PEN

Antibiotics—Penicillin. Rx

Manufacturer: McKesson Laboratories

Nonproprietary Name: Potassium Penicillin G

Indications: Oral treatment for infections due to penicillin-susceptible organisms in both mild and moderately severe cases.

Contraindications: Known sensitivity to it.

Dosage: 200,000 to 500,000 units t.i.d. up to q.3h.

Supplied:

Tablets—200,000, 250,000 and 400,000 units; bottles of 100.

Powder for Syrup—200,000 and 400,000 units; bottles of 16 and 30 doses.

POISON IVY Capsules

Immunizing Agent. Rx

Manufacturer: Broemmel Pharmaceuticals

Nonproprietary Name: Alcoholic extract of Poison Ivy leaves.

Indications: Prevention of dermatitis in individuals who are sensitive to contact with Poison Ivy plants.

Contraindications: Not for treatment of active cases of Poison Ivy dermatitis.

Dosage: One capsule t.i.d. after meals.

Supplied: Capsules—60 mg; bottles of 100.

POISON IVY Elixir

Immunizing Agent. Rx

Manufacturer: Broemmel Pharmaceuticals

Nonproprietary Name: Alcoholic extract of Poison Ivy leaves.

Indications: Prevention of dermatitis in individuals who are sensitive to contact with Poison Ivy plants.

Contraindications: Not for treatment of active cases of Poison Ivy dermatitis.

Dosage: One teaspoonful in water, t.i.d. after meals.

Supplied: Bottles of 3 fl. oz.

OP-SULFA-10

Sulfonamide. Rx

Manufacturer: Broemmel Pharmaceuticals

Nonproprietary Name: Sodium sulfacetamide

Indications: Common infections of the eye and eye socket, acute and chronic blepharitis, blepharoconjunctivitis, conjunctivitis, keratoconjunctivitis and dacryocystitis. Also prophylactically following injuries and removal of foreign objects from the eye.

Contraindications: None mentioned.

Dosage: One to two drops, 2-3 times daily, depending upon the severity of the condition.

Supplied:

5 ml glass dropper bottle—10% sol.
15 ml plastic dropper bottle—10% sol.

OP-SULFA-30

Sulfonamide. Rx

Manufacturer: Broemmel Pharmaceuticals

Nonproprietary Name: Sodium sulfacetamide

Indications: Common infections of the eye and eye socket, acute and chronic blepharitis, blepharoconjunctivitis, conjunctivitis, keratoconjunctivitis and dacryocystitis. Also prophylactically following injuries and removal of foreign objects from the eye.

Contraindications: None mentioned.

Dosage: One or two drops, 2-3 times daily, depending upon the severity of the condition.

Supplied:

5 ml glass dropper bottle—30% sol.
15 ml plastic dropper bottle—30% sol.

COMBINATION PRODUCTS

ORTHO-NOVUM, 1 mg

Progesterone/Estrogen Combination. Rx

Manufacturer: Ortho Pharmaceutical Corp.

Composition:

Norethindrone	1.0 mg
Mestranol	0.05 mg

Indications: Oral contraception.

Contraindications: History of thrombophlebitis or pulmonary embolism, liver dysfunction or disease, known or suspected carcinoma of the breast or genital organs, undiagnosed vaginal bleeding.

Dosage: One tablet daily for 20 days, beginning on day 5 of the menstrual cycle.

Supplied:

Dialpak Dispenser—20 and 60 tablets.
Tare-Pak Dispenser—20 tablets.
Bottles—500 tablets.

PROCTOFOAM

Hemorrhoidal Preparation. Rx

Manufacturer: Reed & Carnrick

Composition:

Pramoxime HCl. 1%
Hydrocortisone acetate 1%

Indications: Proctological conditions that could benefit from an analgesic, anti-inflammatory, mucoadherent preparation.

Contraindications: None mentioned.

Dosage: Not specified.

Supplied: Aerosol container with plastic applicator that delivers measured amounts.

ROBITUSSIN-PE

Cough Preparation. o-t-c

Manufacturer: A. H. Robins Co. Inc.

Composition:

Each 5 ml contains:

Glyceryl guaiacolate	100 mg
Phenylephrine HCl.	10 mg
Alcohol	1.4%

In a cherry-nut flavored syrup.

Indications: Temporary relief of nasal congestion and cough due to the common cold, paranasal sinusitis, or other upper respiratory illnesses.

Contraindications: Hypersensitivity to glyceryl guaiacolate or sympathomimetic amines, marked hypertension, or patients who are receiving MAO inhibitors.

Dosage:

Adults—one tsp. every 3-4 hours.
Children (6-12 years)—one-half to one tsp. q.4h.
Children (3-6 years)—one-fourth to one-half tsp. q.4h.

Supplied: Bottles of one pint and one gallon.

THEOKIN ELIXIR

Bronchodilator. Rx

Manufacturer: Knoll Pharmaceutical Co.

Composition:

Theophylline calcium salicylate	149.5 mg
Potassium iodide	150.0 mg
Alcohol	9.5%

Mint flavored

Indications: Symptomatic treatment of bronchial asthma, chronic bronchitis, and chronic obstructive pulmonary emphysema, when reversible bronchospasm and thickened mucous secretions can be demonstrated.

Contraindications: Peptic ulcer and gout.

Dosage:

Adults—1 tbsp. two or three times daily.
Children—(6 to 12 years)—1 tsp./30 lbs. body weight once or twice daily.
Children—(under 6 years)—½ tsp./15 lbs. body weight, once or twice daily.

Supplied: Pint bottles.

Book Reviews

NEW DRUGS: Evaluated by AMA Council on Drugs, AMA Chicago, 1967, pp 590, $3.50.

The physician must have readily available sources of balanced, authoritative information in order to cope effectively with the complexities of modern pharmacotherapy. *New Drugs*, a publication of the A.M.A. Council on Drugs, now in its third edition, provides such information on new drugs.

The 1967 edition of *New Drugs* is a compilation of introductory statements on various therapeutic classes of drugs and monographs on single-entity drugs marketed in the United States during the period 1957-1966. It contains 265 individual drug monographs, each of which gives information on the actions and uses of the drug and its adverse reactions, contraindications or precautions, dosages and routes of administration, and sizes and strengths of available preparations. The introductory statements to 21 chapters have been thoroughly revised and 10 new monographs have been added. These monographs and introductory statements are based on a thorough review and evaluation by the Council on Drugs and its consultants of all of the laboratory and clinical information, including unpublished data, available to them. Thus, the book presents a concise, unbiased assessment of the newer drugs within the perspective of the therapeutic application of all of the commonly used agents in a particular class of drugs. Since a monograph on a drug is included whether or not the Council's opinion is favorable, *New Drugs* is in no sense a list of approved or accepted drugs.

The index lists drugs by both their nonproprietary (generic) and trade names and includes therapeutic entries. A list of Canadian trade names equivalents is given in the appendix.

SYNOPSIS OF PEDIATRICS. James G. Hughes, B.A., M.D. Second edition. The C. V. Mosby Co., St. Louis, Mo. 1967. 1099 pp. $10.85.

The appearance of a second edition of the Synopsis after four short years speaks for the popularity of this collection of chapters put together by 26 faculty members of the University of Tennessee College of Medicine under the editorial direction of Dr. Hughes. This book of 1100 small pages covers with clarity and selectiveness "the broad field of pediatrics." New chapters and revisions of old ones bring the material up to date as well as any book can be.

The chapters vary a little in quality; naturally so, with different authors, but the book serves a generally useful and important purpose.

Dr. Hughes says that some subjects have been excluded. Had they not been, the volume would cease to be a handbook. Old fogies in the field might miss a word on worms, on vitamin-D resistant rickets, skin diseases, enuresis and the like, but maybe these are too old-hat for the modern pediatrician.

JIW

TREATMENT OF KIDNEY STONES; in Modern Treatment IV, No. 3, May 1967. Edited by Felix O. Kolb, M. D. Harper & Row—By subscription $18.00 a year.

This symposium on the treatment of kidney stones is written primarily by internists and focuses chiefly on the general evaluation and treatment of the recurrent stone-former in an effort to prevent further stone formation.

The section on the general approach covers the known etiologic factors and outlines a rational diagnostic approach. In general this is an excellent discussion, though one might wish for a more thorough discussion of the many diagnostic tests for hyperparathyroidism.

There are very good discussions on the treatment of infection associated with stones, the treatment of renal tubular acidosis, and the prevention of uric acid calculi with allopurinol.

Possibly one of the most significant recent advances in the treatment of idiopathic stone formation is the use of inorganic phosphates. Without going into the extensive research in detail, the authors very ably review the rationale, selection of patients, and results of phosphate therapy in their own sizable series of patients.

The basic orientation of the entire symposium is clinical, and it contains a great deal of worthwhile information for anyone who treats recurrent stone-formers.

Thomas A. Kirkland, Jr., M. D.

A TEXTBOOK FOR MEDICAL ASSISTANTS, by M. Murray Lawton, M. D. and Donald F. Foy, M. S. The C. V. Mosby Company, St. Louis. 1967. Pp 465. Price $8.85.

This is a quite complete book. A great deal of business and medical history is included, such as the history of checks. It could be used in nursing schools as a course for nurses interested in going into office assistantship, in schools for medical secretaries and as the basis of a course for medical students as an aid to setting up practice and as a guide to hiring an assistant. A short course in this material could well be included in the curriculum.

Part I—"Business Practices" is more secretarial and offers several different approaches to the business part of medical practice.

Part II—"Clinical Practices" offers a short course in general medicine including anatomy, terminology, drugs, medical technology, x-ray and emergencies.

This would also be an excellent reference book for a physician's office as an aid to medical assistants.

Virginia W. Mitchell
Medical Assistant

HANDBOOK OF ORTHOPAEDIC SURGERY, Seventh Edition, Alfred R. Shands, Jr. and Richard B. Raney. C. V. Mosby Company, St. Louis, Mo., 1967. 573 pp. $12.00.

The objective of this book is the "presentation of fundamental facts and principles of Orthopaedic Surgery as concisely as possible and yet in sufficient detail to convey a well rounded knowledge of the subject."

There are 474 pages of text covering all phases of orthopaedic surgery in sufficient detail to acquaint students and practitioners with the subjects. All are very clearly and concisely written. Illustrations are abundant and good.

For those interested further in a subject there is a complete bibliography covering each topic. All are authoritative and written in English and listed according to chapter and subject.

The *Handbook* is recommended particularly for medical students as a text and one which can be referred to later for concise information.

The book most aptly accomplished its objective.

B. L. Freeman, Jr., M. D.

MANUAL OF PREOPERATIVE AND POSTOPERATIVE CARE, by the Committee on Pre and Postoperative Care, American College of Surgeons. W. B. Saunders Co., Philadelphia. 1967. Pp. 506. $8.50.

The manual is essentially the application of basic science to the preoperative and postoperative management of surgical cases. It provides ready access to present day knowledge in surgical metabolism and nutrition; fluid and electrolyte balance; endocrine, cardiac, respiratory and renal physiology; clotting disorders; infection and shock. It is a guide and does not give details of management of individual procedures. It should be of particular value to the house officer who is rotating through different services. There is an appendix which gives data on laboratory tests, diets and formulas.

Wm. H. Prioleau, M. D.

The South Carolina Hospital Association, Columbia, has been awarded a federal contract for a program to recruit inactive nurses and other professional and paramedical health personnel back to active employment. The one-year contract was awarded to the Hospital Association by the Division of Nursing, Bureau of Health Manpower, Public Health Service. Fifty such contracts have been awarded, one to each of the states. The South Carolina contract was effective June 26, 1967.

W. H. Botts, president of the South Carolina Hospital Association said that by recruiting inactive health personnel back to active employment in the health field, the new project can help to relieve existing shortages. He stated that South Carolina has a large number of inactive health workers. The number of inactive registered nurses in the state is 1,671 and, while no exact figures on other inactive professional health personnel are available, the number is estimated to be quite high.

Of recent vintage is the discussion about routine physical examinations. The value of a regular physical exam is self-evident in the early diagnosis of many diseases. Common sense dictates that such procedures are desirable. The rationale seems to be summed up by the proverb, "An ounce of prevention is better than a pound of cure." But not only are we unsure about what diseases and conditions we should seek to detect among the more than 6,000 varieties, we are now finding that early diagnosis may not be the golden fleece of medicine in every disorder. In attempting to reduce the death toll due to cancer, for example, early diagnosis has been our clarion call for decades. But evidence increases suggesting that, in some slow growing varieties of malignancy, patients may have a relatively good five-year survival rate even if diagnosis is delayed; whereas faster growing, biologically different varieties may be incurable with present modes of treatment, no matter how early their presence is detected. This observation should not, of course, lead us to abandon efforts to make early diagnoses; but we also must not ignore other approaches from the mistaken belief that looking for tumors on routine examination will necessarily and dramatically raise the survival rate.

Even relatively minor routine procedures deserve periodic reexamination. For example, consider the unthinking ritual of the appendectomy. Carbolic acid, applied to the appendeceal stump, does not kill bacteria. The alcohol, used next, dissolves (not neutralizes) carbolic acid, which may make the use of carbolic acid seem even more questionable. And why wash the wound with "normal" saline, which is "not normal for anything except an inconsequential plankton"?

JAMA, 199, 155.

Fewer new medicines were introduced in the United States in 1966 than in any of the previous 18 years for which accurate records are available. Paul de Haen. Inc., Drug Information Services, has reported.

The number of prescription drug products introduced last year dropped to 80 from 112 the year before. Over a ten-year period the number of new medicines approved by the United States Food and Drug Administration for marketing has declined 80 per cent, de Haen said.

Average length of hospital stay for Medicare patients in the nation's community hospitals increased for the fifth consecutive month in December, according to Hospital Indicators, a monthly feature in HOSPITALS, Journal of the American Hospital Association.

Reporting on December 1966 figures in the March 16 issue of HOSPITALS, survey results show that the over-65 age group had an average length of stay of 13.3 days per admission in December while the under-65 patients held relatively constant at 6.8 days. Since July 1 when Medicare became effective the average length of stay for the over-65 group has increased from 11.2 days in July to 12.0 in August, 12.5 in September, 12.6 in October, 12.7 in November to the latest report of 13.3 days.

Retrospective study of posthepatitic cirrhosis of liver—F. H. Franken et al. Deutsch Med Wschr 91: 1753-1761 (Oct 7) 1966.

A total of 332 patients treated between 1934 and 1961 for viral hepatitis were followed up by questionnaire. Full information was obtained of 279 (84%), and 144 were reexamined (almost all of those who had any complaints or were still treated because of "liver disease"). Fourteen patients had died but, except for one alcoholic, none of them of liver disease. In 33 patients one or several liver function or serum lability tests were abnormal and there was clinical evidence of chronic liver disease. Further studies, including liver biopsy, in this latter group demonstrated that in the majority the abnormalities were due to other conditions such as cardiovascular disease, diabetes mellitus, chronic peptic ulcer, chronic cholecystitis with cholelithiasis, chronic polyarthritis, or alcoholism. Three patients, all severe alcoholics, had cirrhosis of the liver. There was no case in which cirrhosis of the liver could be exclusively ascribed to the earlier attack of hepatitis.

Now in the press and shortly to be
published by the
South Carolina Medical Association
Volume 2
of
A History of Medicine
in South Carolina
By Joseph I. Waring, M. D.
covering the period 1825 to 1900.

This book is a continuation of the first volume, published in 1964, whose story ended at 1825. The preceding volume was well received by medical historians.

The second volume will soon be available.

For a limited period members of the South Carolina Medical Association are entitled to purchase this book at $3.25 postpaid. Orders may be placed now.

It's price on the market will be $7.75 postpaid.

Advance Order Form

South Carolina Medical Association
Historical Committee
80 Barre Street
Charleston, S. C. 29401
Gentlemen:

Please send me .... copies of the book "A History of Medicine in South Carolina, 1825-1900", by Joseph I. Waring, M. D. at $3.25 per copy.

Payment enclosed.

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Name

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Please make check payable to:
S. C. Medical Association,
Historical Committee

FACTS
COUNT

IN THE FOOD BUSINESS

facts count, too, in selecting health care coverage

Food processors and retailers in and out of South Carolina find facts an essential ingredient in their business. Top decision makers must have facts at their fingertips . . . facts concerning weather, harvesting and crop yields, as well as new processes and formulas. They also rely on facts in food packaging, storing, shipping, advertising and pricing. Facts flavor every decision they make for today's complex marketplace.

Two of the biggest names in food—a soup company and a supermarket chain—have made facts count in determining employee benefits. They have found just the right ingredients in the Blue Cross and Blue Shield health care package. It's the choice of 383,000 firms all across the country. Blue Cross and Blue Shield don't skimp on benefits. Per dollar invested, they provide the most comprehensive coverage available.

Here's a fact no employer can afford to overlook: employees and their dependents are enthusiastic about Blue Cross and Blue Shield health care protection.

Make these facts count for your firm. Talk with your Blue Cross and Blue Shield representative soon. He can make up a health care package that's just right for your employees. Ask about Prolonged Illness Coverage, too. PIC is the extended protection that provides up to $10,000 extra to your sound basic coverage.

Review the facts. Your first choice will be Blue Cross and Blue Shield.

Blue Cross®–Blue Shield®

Medicare Marches On

At a cost of nearly $1 billion, more than six million older persons got hospital and medical benefits during the first six months of the medicare program.

Social Security Commissioner Robert M. Ball expressed satisfaction with the overall operations so far of the health insurance program for the elderly. But Ball warned of bed shortages in the nation's capital, in various New England states, and in most rural areas when a new medicare benefit of nursing home care went into effect Jan. 1. He estimated that from 50,000 to 60,000 beds would be needed for extended care in nursing homes.

The Commissioner recommended a number of changes in the program:

—He urged that medicare benefits, which apply to persons 65 or older, be extended to 1.3 million disabled persons.

—He said the major improvement needed in the Social Security program is an "across-the-board" increase in benefits. Over-all benefits to be paid out in 1966 will rise from $21 billion in 1966 to $25 billion in 1967, he noted. President Johnson has announced he will seek a boost of about 10 per cent in Social Security benefits in the next Congress.

Ball's report on the first six months of medicare included:

—About 2.5 million elderly persons received free hospital care and 3.5 million benefited from medical services.

—Since medicare began July 1, 1966, hospital occupancy increased 5 per cent, as expected. Thirty per cent of all hospital beds were occupied by those 65 or older at the end of 1966.

—About 6,700 hospitals now are participating in medicare. About 250 hospitals were excluded because they did not meet minimum standards, and 75 hospitals because of racial discrimination.

—Payments to doctors and skilled medical personnel, such as radiologists, have taken too long.

—Overcrowding of hospitals in various "isolated" incidents.

—Almost all of 17.5 million persons who signed up for additional medical insurance at a premium of $3 maintained their payments.

Seventeen hospitals in five states declared ineligible for federal funds because of failure to comply with provisions of the 1964 Civil Rights Act were granted public hearings by the Public Health Service in Alabama, Louisiana, Mississippi, South Carolina and Texas.

"Discriminatory practices found at the hospitals include the segregation of patients . . . an absence of negro physicians . . . and the segregation of training facilities," a PHS spokesman said.

Sen. George D. Aiken, R., Vt., proposed a nine-point program to liberalize benefits under the government's medicare plan for action by Congress. One would extend medicare drug coverage to prescriptions for old people whether or not associated with hospital confinement. A similar plan was included in a Senate-passed tax bill last summer but was killed in a Senate-House conference. Other Aiken proposals would eliminate deductible and co-insurance features, waiting periods and enrollment deadlines from the medicare plan, lower the 65 year age requirement for women to 62, and permit payment of medical specialist fees customarily provided by hospitals.

"Hello, Blue Cross?"

Seven South Carolina Hospitals Newly Accredited

South Carolina now has 54 accredited hospitals, compared to 47 in the previous year. The seven institutions which received the coveted seal of approval from the Joint Commission on Accreditation of Hospitals were: McClennan Banks Memorial Hospital, Charleston; Saunders Memorial Hospital, Florence; Allen Bennett Memorial Hospital, Greer; Hillcrest Hospital, Simpsonville; Lila Doyle Chronic Hospital, Seneca; Finger Clinic, Marion and Coleman-Aimar Clinic, Darlington.

The state now has 72% of its 8,698 non-federal short-term general hospital beds accredited, and 88% of the total beds accredited. Exactly 50% of the state's 90 general hospitals are accredited.

* * *

In the nine month period from July 1, 1966 to March 31, 1967, visits to physicians from private patients 65 years of age and over numbered 197 million. This total is nearly 10% higher than the volume of 180 million elderly patient visits recorded during a comparable nine month period prior to July 1, 1966—Medicare's effective date. In spite of this, overall private patient loads have not increased, possibly because the current, relatively mild respiratory season resulted in fewer visits from younger patients. These findings were disclosed in recent figures released by the National Disease and Therapeutic Index (N.D.T.I.), a nationwide survey of private medical practice.

* * *

Smith Kline & French Laboratories has just released its *Catalog of Services* for 1967-68.

Included in the illustrated Catalog are medical films, booklets, periodicals, medical color television, Speakers Bureau, and the "Code 4" cardiopulmonary resuscitation training program.

New to this year's Catalog is the film, "Reinforcement Therapy," which discusses the application of learning theory to the treatment of emotional disturbance. Also included for the first time are: *Medical Assistant*, a quarterly publication for the physician's office assistant, Oral Communications Seminars for medical school faculties, and Medical Information Service on SK&F products.

* * *

A physician-operated medical insurance plan in Vancouver, B. C. is abandoning individual medical insurance because it cannot compete with the government's medical care plan. Medical Services Inc., said about 7,500 individuals would be dropped Nov. 30, but group plans would continue.

New! Welch Allyn LITE SET

Pocket Size OTOSCOPE and OPHTHALMOSCOPE

■ Lightweight ■ Compact ■ Economical

These new pocket-size instruments are only 6″ high and weigh only 2¼ oz. each, complete with batteries.

With the LITE SET in your pocket, you are always ready for that "quick look" during hospital rounds and house calls.

The OTOSCOPE

- The latest Welch Allyn fiber optics system gives brilliant distal illumination and unobstructed vision.
- Lightweight—only 2¼ oz. complete, vs. 10½ oz. for standard Welch Allyn otoscope and medium battery handle.
- Uses KLEENSPEC® disposable specula in 4mm. size.
- Long-life, Mallory alkaline batteries.

The OPHTHALMOSCOPE

- Newest Welch Allyn mirror optical system.
- Lightweight—only 2¼ oz. complete, vs. 12 oz. for standard Welch Allyn "oph" and medium battery handle.
- Eleven lenses, —15 to +20.
- Long-life, Mallory alkaline batteries.

LITE SET No. 929, complete with Pocket size Ophthalmoscope and Otoscope, both with Handles, and with Tube of Kleenspec Specula, in Fitted Case.

Diarrhea

TROCINATE® 400 MG.
BRAND THIPHENAMIL HCl.

The relief received from the first Trocinate 400 mg. tablet is so prompt that the discomfort of diarrhea ceases to be a bother. May be repeated every four hours.

Upon request, a supply of Trocinate 400 mg. with literature will be sent to physicians for their personal use.

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ASHEVILLE, NORTH CAROLINA

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A Division Of The Department Of Psychiatry Of Duke University

Accredited by the Joint Commission on Accreditation and Certified for Medicare

Complete facilities for evaluation of and intensive treatment of psychiatric patients, including individual psychotherapy, group therapy, psychodrama, electro-convulsive therapy, Indoklon convulsive therapy, drugs, social service work with families, family therapy, and an extensive and well organized activities program, including occupational therapy, art therapy, athletic activities and games, recreational activities and outings. The treatment program of each patient is carefully supervised in order that the therapeutic needs of each patient may be realized.

Complete modern facilities with 85 acres of landscaped and wooded grounds in the City of Asheville.

Brochures and information on financial arrangements available

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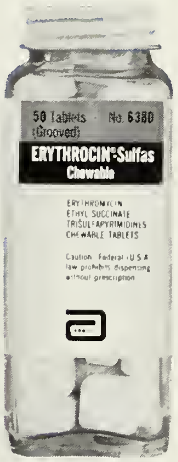
or
Charles W. Neville, Jr., M. D.
Assistant Professor of Psychiatry and Medical Director
Area Code 704 - 253-2761

Perhaps there have been times when you wanted to prescribe erythromycin and triple sulfas for little patients. Now you can—with a choice of two new fine-tasting pediatric forms.

New–Two Pediatric Forms of Erythromycin and Triple Sulfas



ERYTHROCIN®-SULFAS Chewable

(Erythromycin ethyl succinate-trisulfapyrimidines chewable tablet)

In clinical trials[1,2], this orange-flavored tablet was given to 55 patients, aged four months to 18 years.

Diagnoses (multiple in some cases) represented a cross section of bacterial infections commonly seen in pediatric office practice.

Therapy was given from three to 12 days, with an average of six days.

Of the 55 patients, 30 were reported cured within 72 hours, while 22 showed partial recovery within the same time, and subsequent clinical cure.

A clinical cure rate of 94.5%

ERYTHROCIN®-SULFAS Granules

(Erythromycin ethyl succinate-trisulfapyrimidines granules for oral suspension)

87 patients were treated[1,2]—all children, ages four months to 15 years.

The diagnoses were multiple in some cases and were chiefly bacterial infections of the respiratory tract.

Dosage was maintained from three to 10 days; average treatment was five days. All of the ill children accepted the orange-flavored suspension favorably.

53 were clinically cured within 72 hours, while 32 showed partial relief within the same time, and subsequent clinical cure.

701358

A clinical cure rate of 97.7%

ABBOTT

Brief Summary on next page

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1. Case Reports on File, Dept. Clin. Development, Abbott Laboratories.
2. Polley, R.F.L., Use of Erythromycin-Sulfas in Office Practice, Western Med., 7:177, July, 1966.

ERYTHROCIN®-SULFAS
Brief Summary

Contraindications: Known sensitivity to erythromycin or sulfonamides. Because of the possibility of kernicterus with sulfonamides, do not use in pregnancy at term, premature or newborn infants.

Warnings: As with other forms of sulfonamide therapy, carefully evaluate patients with liver or kidney damage, urinary obstruction, or blood dyscrasia. Deaths have been reported from hypersensitivity reactions and blood dyscrasias following use of sulfonamides. Perform blood counts and liver and kidney function tests if used repeatedly at close intervals or for long periods.

Precautions, Side Effects: Occasionally mild abdominal discomfort, nausea or vomiting may occur with erythromycin, generally controlled by reduction of dosage. Mild allergic reactions (such as urticaria and other skin rashes) may occur. Serious allergic reactions have been extremely infrequent. Use sulfonamides with caution in patients with a history of allergy. Assure adequate fluid intake to prevent crystalluria and institute alkali therapy if indicated. If overgrowth of nonsusceptible organisms occurs, withdraw the drug and institute appropriate treatment. If a patient should show signs of hypersensitivity, appropriate countermeasures (e.g. epinephrine, steriods, etc.) should be administered and the drug withdrawn.

Adverse Reactions: Sulfonamide therapy may be associated with headache, nausea, vomiting, urticaria, diarrhea, hepatitis, pancreatitis, blood dyscrasias, neuropathy, drug fever, skin rash, injection of the conjunctiva and sclera, petechiae, purpura, hematuria and crystalluria.

Side effects due to erythromycin are infrequent, but occasional abdominal discomfort, nausea, or vomiting, urticaria and other skin rashes may occur.

Supplied: The Granules for Oral Suspension come in bottles of 60 ml. and 150 ml. The Chewable tablets are in bottles of 50. Each 5-ml. teaspoonful of reconstituted Granules or each Chewable tablet provides erythromycin ethyl succinate equivalent to 125 mg. of erythromycin activity and 167 mg. of each of sulfadiazine, sulfamerazine and sulfamethazine.

701358

PSYCHIATRIC RESIDENCIES FOR G.P's.

NIMH residency training in approved three year program. Stipend $11,500 to $12,000. Applicants must have completed four years or more of practice in field of medicine other than psychiatry after an approved internship. Applicants should not be over 45. Address inquiries to Chairman, Department of Psychiatry, Medical College of Virginia, Richmond, Virginia 23219. Include curriculum vitae and recent photograph.

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Before prescribing, see complete prescribing information in SK&F literature or *PDR*. A brief precautionary statement follows.
Contraindications: Glaucoma, prostatic hypertrophy, stenosing peptic ulcer, pyloroduodenal obstruction, or bladder neck obstruction.
Precautions: Use cautiously in the presence of hypertension, hyperthyroidism, coronary artery disease; warn vehicle or machine operators of possible drowsiness.
Usage in Pregnancy: Use cautiously, especially in the first trimester. *Note:* The iodine in isopropamide iodide may alter PBI test results and will suppress I^{131} uptake; discontinue 'Ornade' one week before these tests.
Adverse Reactions: Drowsiness; excessive dryness of nose, throat or mouth; nervousness; insomnia. Other known possible side effects of the individual ingredients: nausea, vomiting, diarrhea, rash, dizziness, fatigue, tightness of chest, abdominal pain, irritability, tachycardia, headache, difficulty in urination. Thrombocytopenia, leukopenia and convulsions have been reported but no causal relationship has been established.

a stuffy nose
is no
laughing matter

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Each capsule contains 8 mg. of Teldrin® (brand of chlorpheniramine maleate), 50 mg. of phenylpropanolamine hydrochloride, and 2.5 mg. of isopropamide, as the iodide.

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brand of sustained release capsules

each one can
give him all-day
or all-night relief

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DON'T BE LULLED BY RELATIVE LACK OF FLU LAST WINTER. THIS WINTER BE PREPARED: WHEN THE COMPLAINTS ARE COUGH AND CONGESTION, YOU CAN RELIEVE THESE SYMPTOMS WITH TUSSAGESIC TABLETS. ONE TIMED-RELEASE TABLET AT MORNING, MIDAFTERNOON AND BEDTIME BRINGS UP TO 24 HOURS' RELIEF FROM TROUBLESOME COUGH AND STUFFED AND RUNNY NOSE. TUSSAGESIC IS THE FAMOUS TRIAMINIC FORMULA, PLUS THREE OTHER PROVED CONSTITUENTS. MAKES PATIENTS MORE COMFORTABLE. FAST. ASK YOUR DORSEY REPRESENTATIVE FOR SUPPLY OF STARTER SAMPLES, OR IF FLU IS ALREADY EPIDEMIC, PHONE COLLECT. SEE BELOW.

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Triaminic® (phenylpropanolamine hydrochloride 25 mg., pheniramine maleate 12.5 mg., pyrilamine maleate 12.5 mg.)	50 mg.
Dextromethorphan hydrobromide	30 mg.
Terpin hydrate	180 mg.
Acetaminophen	325 mg.

Dosage: Adults—1 tablet, swallowed whole to preserve timed-release feature, in morning, midafternoon and at bedtime. Side effects: Occasional drowsiness, blurred vision, cardiac palpitations, flushing, dizziness, nervousness or gastrointestinal upsets. Precautions: The patient should be advised not to drive a car or operate dangerous machinery if drowsiness occurs. Use with caution in patients with hypertension, heart disease, diabetes or thyrotoxicosis.

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For relief of "flu-like" symptoms
Tussagesic timed-release tablets

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"All Registered Nurses are Alike"

It stands to reason. They all go through the same training; they all have to pass the same tests: they all have to measure up to the same standards. Therefore, all registered nurses are alike.

That's nonsense, of course. But it's no more nonsensical than what some people say about aspirin. Namely: since all aspirin is at least supposed to come up to certain required standards, then all aspirin tablets must be alike.

Bayer's standards are far more demanding. In fact, there are at least *nine specific differences* involving purity, potency and speed of tablet disintegration. These Bayer® standards result in significant product benefits including gentleness to the stomach, and product stability that enables Bayer tablets to *stay* strong and gentle until they are taken.

So next time you hear someone say that all aspirin tablets are alike, you can say, with confidence, that it just isn't so.

You might also say that all registered nurses aren't alike, either.

when bursitis hits a 280–lb. tackle, hit back with Butazolidin alka

Indications: Osteoarthritis, rheumatoid arthritis, rheumatoid spondylitis, psoriatic arthritis, acute gout, painful shoulder (peritendinitis, capsulitis, bursitis and acute arthritis of that joint), acute superficial thrombophlebitis.

Contraindications: Edema; danger of cardiac decompensation; history or symptoms of peptic ulcer; renal, hepatic or cardiac damage; history of drug allergy; history of blood dyscrasia. The drug should not be given when the patient is senile or when other potent drugs are given concurrently. Large doses of Butazolidin alka are contraindicated in glaucoma.

Warning: If coumarin-type anticoagulants are given simultaneously, watch for excessive increase in prothrombin time. Instances of severe bleeding have occurred. Pyrazole compounds may potentiate the pharmacologic action of sulfonylurea, sulfonamide-type agents and insulin. Carefully observe patients receiving such therapy. Use with great caution in the first trimester of pregnancy.

Precautions: Before prescribing, carefully select patients, avoiding those responsive to routine measures as well as contraindicated patients. Obtain a detailed history and a complete physical and laboratory examination, including a blood count. The patient should not exceed recommended dosage, should be closely supervised and should be warned to discontinue the drug and report immediately if fever, sore throat, or mouth lesions (symptoms of blood dyscrasia); sudden weight gain (water retention); skin reactions; black or tarry stools or other evidence of intestinal hemorrhage occur. Make regular blood counts. Discontinue the drug immediately and institute countermeasures if the white count changes significantly, granulocytes decrease, or immature forms appear. Use greater care in the elderly and in hypertensives.

Adverse Reactions: The most common are nausea, edema and drug rash. Swelling of the ankles or face may be minimized by withholding dietary salt, reduction in dosage or use of diuretics. In elderly patients and in those with hypertension the drug should be discontinued with the appearance of edema. The drug has been associated with peptic ul-

For 280-lb. tackles—or 108-lb. housewives—Butazolidin alka can hasten recovery from the agonizing pain of shoulder bursitis.

It's not for every patient. Check carefully the Contraindications, Warning and Precautions shown below.

And adverse reactions may occur. The most common are nausea, edema and rash. Rarely, agranulocytosis has been reported. All adverse reactions are listed below, too.

Play-for-pay or workaday patients—when they come up with shoulder bursitis and your clinical judgment indicates Butazolidin alka—go with it.

And watch the comeback.

cer and may reactivate a latent peptic ulcer. The patient should be instructed to take doses immediately before or after meals or with milk to minimize gastric upset. Mild drug rashes frequently subside with reduction of dosage. However, rash accompanied by fever or other systemic reactions usually requires withholding medication. Purpuric rash has also been reported. Agranulocytosis, exfoliative dermatitis, Stevens-Johnson syndrome, or a generalized allergic reaction similar to serum sickness may occur and require permanent withdrawal of medication. Stomatitis, salivary gland enlargement, vomiting, vertigo and languor may occur. Leukemia and leukemoid reactions have been reported. While not definitely attributable to the drug, a causal relationship cannot be excluded. Thrombocytopenic purpura and aplastic anemia may occur. Confusional states, agitation, headache, blurred vision, optic neuritis and transient hearing loss have been reported, as have hyperglycemia, hepatitis, jaundice, and several cases of anuria and hematuria. With long-term use, reversible thyroid hyperplasia may occur infrequently. Moderate lowering of the red cell count due to hemodilution may occur. 6509-V(B)R2

Butazolidin® alka

Capsules

100 mg.	phenylbutazone
100 mg.	dried aluminum hydroxide gel
150 mg.	magnesium trisilicate
1.25 mg.	homatropine methylbromide

Dosage in painful shoulder: Initial: 3 to 6 capsules daily in 3 or 4 equal doses. Trial period: 1 week. Maintenance dosage should not exceed 4 capsules daily; response is often achieved with 1 or 2 capsules daily.

For complete details, please see full prescribing information.

Geigy Pharmaceuticals
Division of Geigy Chemical Corporation, Ardsley, New York

Geigy

Sustained circulatory, respirator and cerebral stimulation for th

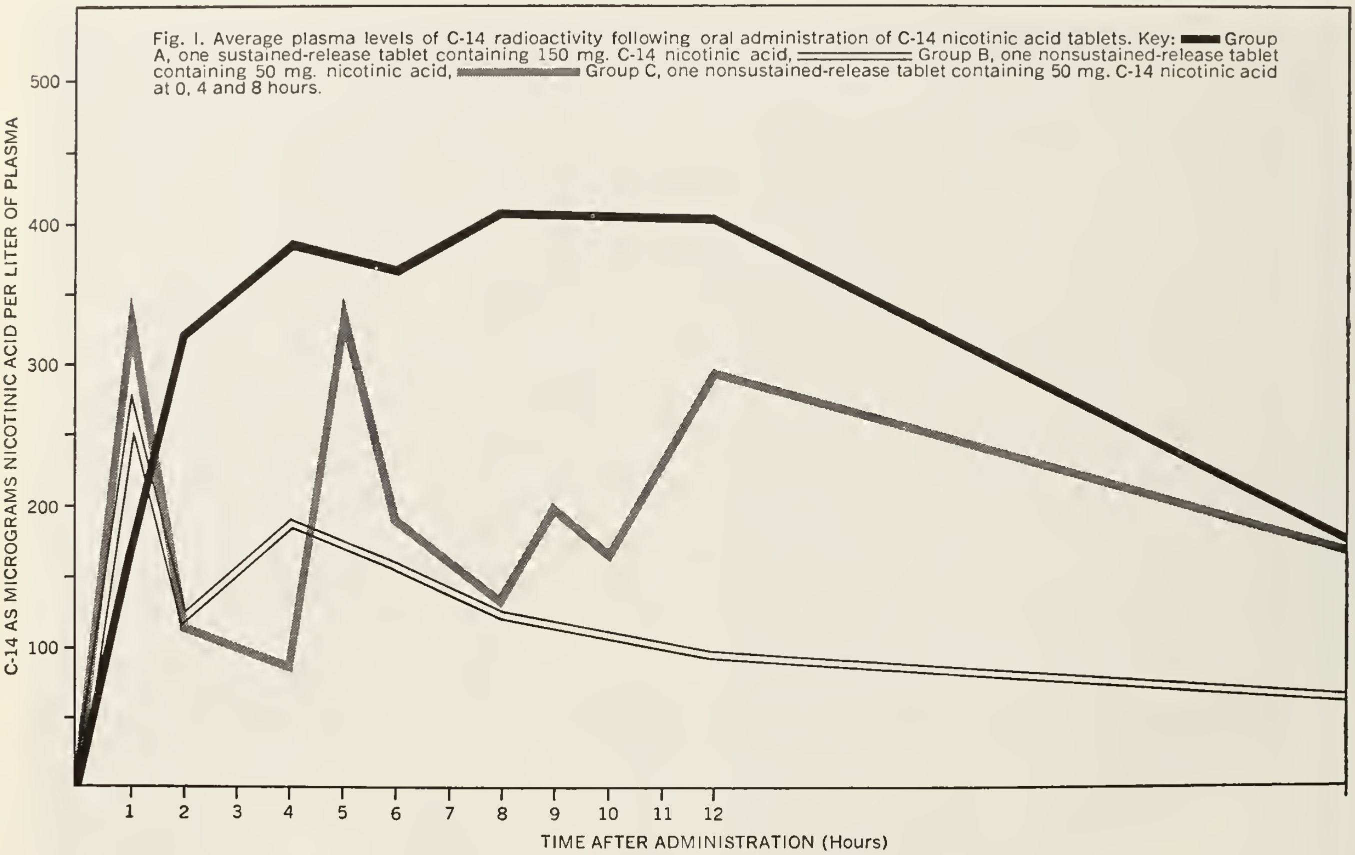

Fig. I. Average plasma levels of C-14 radioactivity following oral administration of C-14 nicotinic acid tablets. Key: ━ Group A, one sustained-release tablet containing 150 mg. C-14 nicotinic acid, ═ Group B, one nonsustained-release tablet containing 50 mg. nicotinic acid, ▬ Group C, one nonsustained-release tablet containing 50 mg. C-14 nicotinic acid at 0, 4 and 8 hours.

(fewer absent doses by absent-minded patients)

Human volunteer subjects were administered Geroniazol TT tablets with the nicotinic acid component made radioactive with C-14. Plasma and urine samples were analyzed. (See Figures I and II) The radioactive tracer study substantiated the previous clinical evidence that the release of nicotinic acid from the Geroniazol TT tablet produced a gradual rise in plasma levels to a plateau for a total of 12 hours and more.

Such proven sustained activity makes the management of geriatric patients much easier by minimizing the possibility of neglected doses through absent-mindedness or senile confusion. Therapy *can* be continuous on a daily dose of only one Geroniazol TT tablet every 12 hours.

The gradual release of nicotinic acid in Geroniazol TT will provide the well-known peripheral vasodilatation needed in patients with deficient circulation and with a minimum amount (if any) of "flushing." Also, cerebrovascular circulation is complemented by pentylenetetrazol, long-established as a cerebral and respiratory stimulant.

Geroniazol TT improves the typical, unfortunate, signs of senile confusion. Patients become more alert,

aged and debilitated

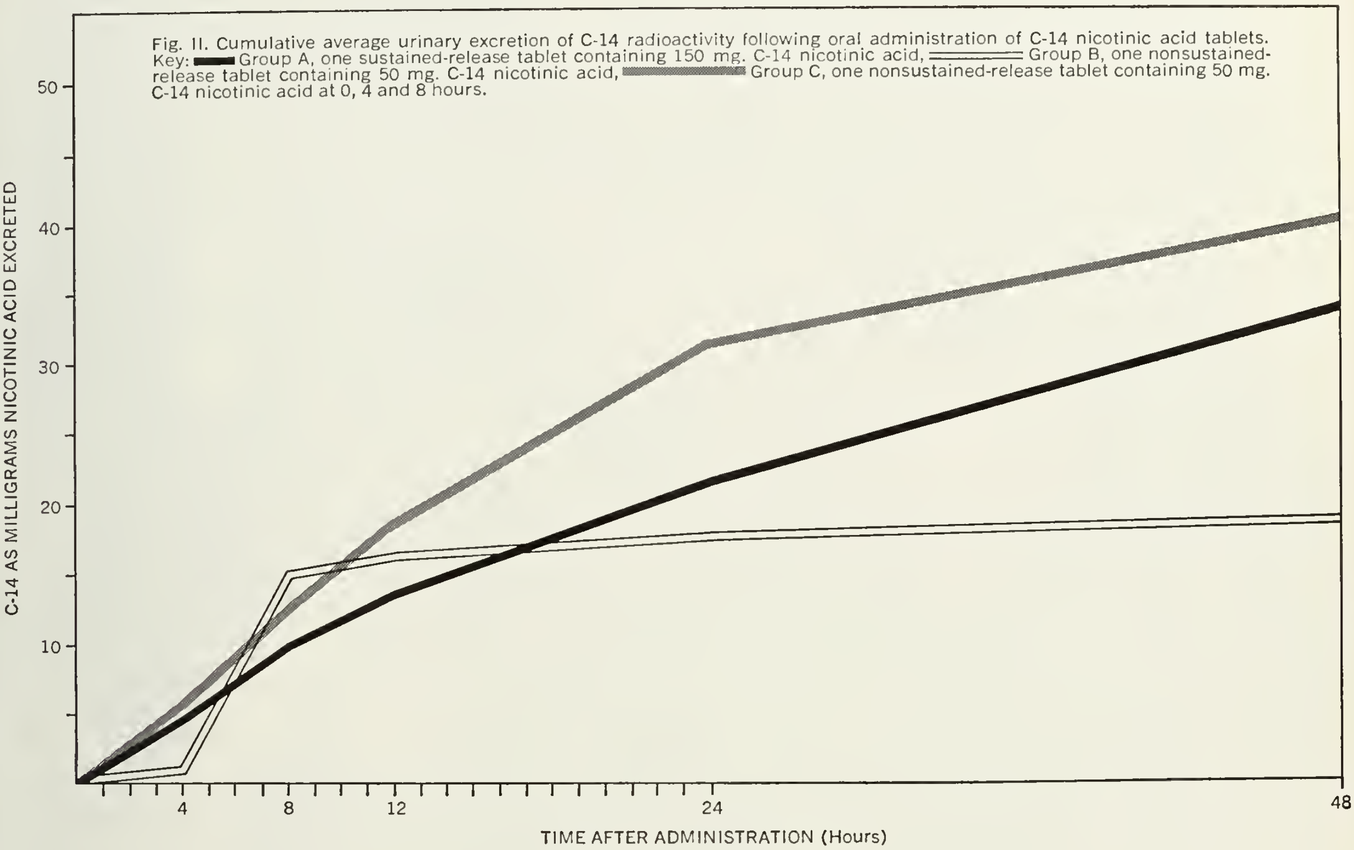
Fig. II. Cumulative average urinary excretion of C-14 radioactivity following oral administration of C-14 nicotinic acid tablets. Key: ▬ Group A, one sustained-release tablet containing 150 mg. C-14 nicotinic acid, ═ Group B, one nonsustained-release tablet containing 50 mg. C-14 nicotinic acid, ▒ Group C, one nonsustained-release tablet containing 50 mg. C-14 nicotinic acid at 0, 4 and 8 hours.

C-14 AS MILLIGRAMS NICOTINIC ACID EXCRETED
50
40
30
20
10
4
8
12
24
48
TIME AFTER ADMINISTRATION (Hours)

less confused and moody. Personal care, memory, emotional stability, social attention improve. Fatigue, apathy and irritability are reduced.

A prescription for 100 tablets of Geroniazol TT will permit your patients to enjoy the benefits of time-prolonged nicotinic acid/pentylenetetrazol therapy, at an economical price. Dosage is only one tablet every 12 hours.

Contraindications: There are no known contraindications.

Precautions: Exercise caution when treating patients with a low convulsive threshold.

Side Effects: Side effects are rarely encountered, however due to the vasodilatation effect of nicotinic acid, transitory mild nausea, flushing, tingling and pruritus are possible.

Dosage: One tablet every 12 hours.

Supplied: Prescribe bottles of 100 tablets, to take advantage of recent price reduction.

References: 1. Report by Nuclear Science & Engineering Corp., Pittsburgh, Pa., in files of Philips Roxane Laboratories. 2. Connolly, R.: W. Virginia Med. J. *56*:263 (Aug.) 1960. 3. Curran, T. R., and Phelps, D. K.: Am. Pract. & Digest Treat. *11*:617 (July) 1960.

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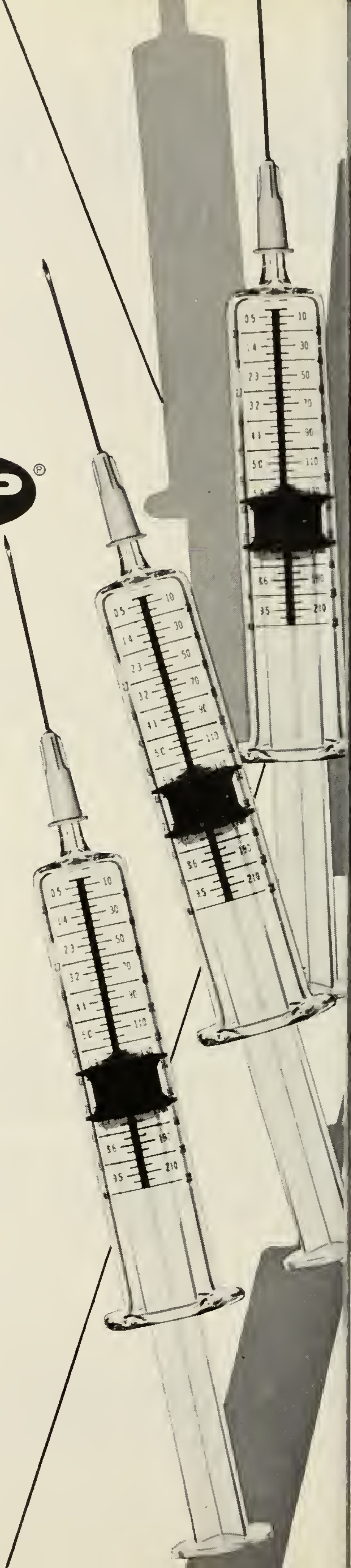
PHILIPS ROXANE LABORATORIES
Division of Philips Roxane, Inc., Columbus, Ohio
A Subsidiary of Philips Electronics and
Pharmaceutical Industries Corp.

Geroniazol® TT

nicotinic acid 150 mg., pentylenetetrazol 300 mg.
Tempotrol® Time Controlled Tablet



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(50 mg. per ml.)

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IN A COMPLETE,
STERILE,
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PATIENT-UNIT.

BSP, one of the more valuable single laboratory procedures for determining hepatic function, is now packaged in a complete individual patient-unit.

Each BSP Disposable Unit contains a sterile syringe with the 5 mg./kg. BSP dosage schedule imprinted on the barrel, a sterile needle, alcohol swab and a 7.5 ml. or 10 ml. size ampule of terminally sterilized Bromsulphalein solution.

This all-inclusive disposable put-up lessens the chance of cross-infection and saves time and labor— the most costly commodities.

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"Man's best friend" in wintertime diarrheas

In winter "flu" and viral gastroenteritis, Donnagel (4 oz. size!) can bring aid and comfort to sufferers from both diarrhea and its discomforts because it contains kaolin and pectin *plus* belladonna alkaloids (as in Donnatal®). Donnagel treats the whole diarrhea problem. Available on your prescription or recommendation.

For acute, non-specific diarrheas
Donnagel® -PG (Donnagel with paregoric equivalent).
Donnagel formula plus powdered opium, USP, 24.0 mg. (equivalent to paregoric 6 ml.) (warning: may be habit forming). Alcohol, 5%.
All the antidiarrheal benefits of paregoric without the unpleasant taste. Real banana flavor makes it acceptable, even to children.
See product literature before prescribing.

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Richmond, Va. 23220

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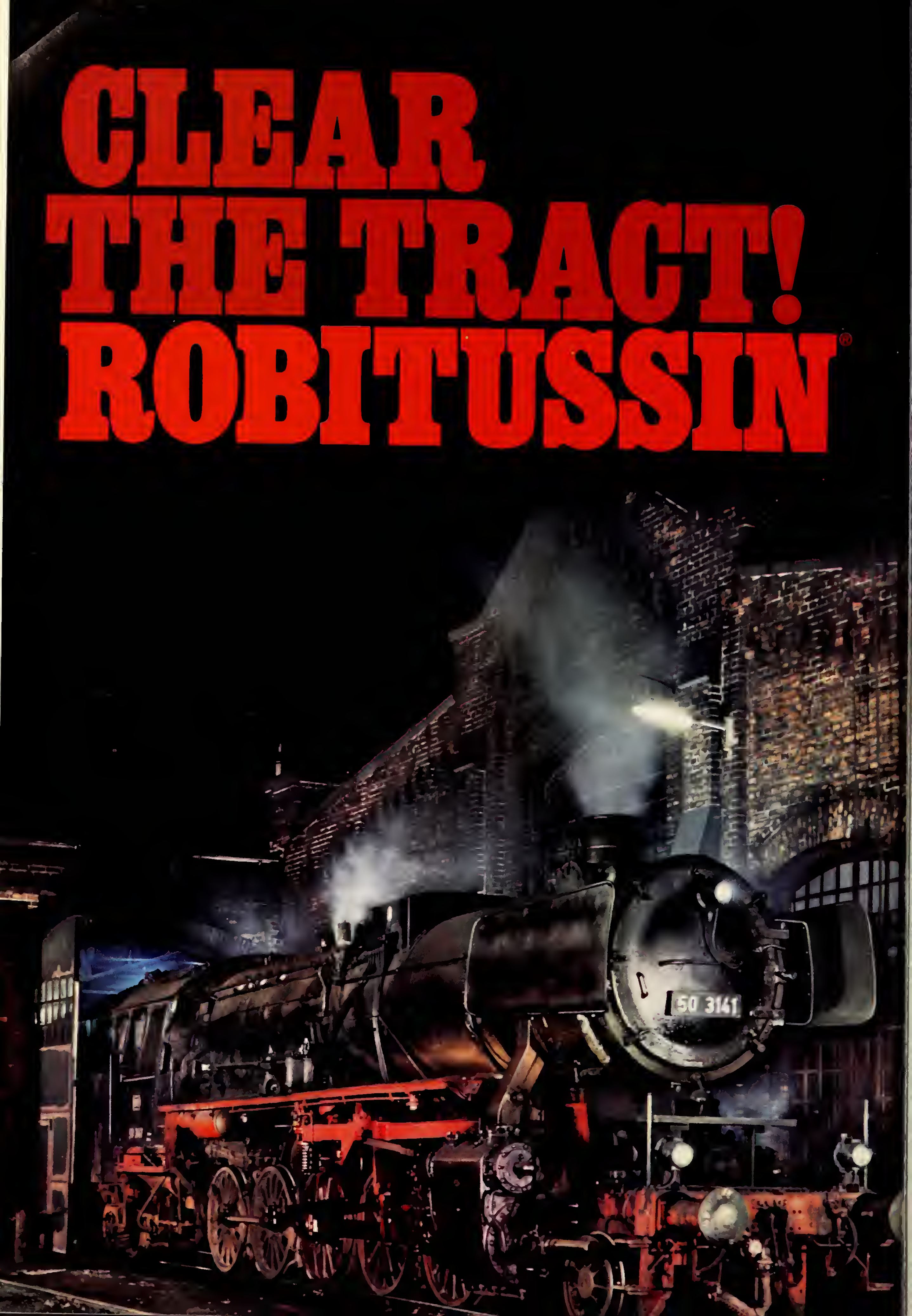
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THE TRACT!
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THERE'S A FORMULATION FOR EVERY COUGHING NEED

All the Robitussins contain glyceryl guaiacolate, the outstanding expectorant agent that greatly increases the output of lower respiratory tract fluid. Increased RTF volume exerts a demulcent effect on the tracheo-bronchial mucosa, promotes ciliary action, and makes thick, inspissated mucus less viscid and easier to raise.

For coughs of colds and "flu"
ROBITUSSIN®
Each 5 cc. contains:
Glyceryl guaiacolate . . . . . . 100 mg.
Alcohol, 3.5%

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ROBITUSSIN® A-C
Each 5 cc. contains:
Glyceryl guaiacolate . . . . . . 100 mg.
Pheniramine maleate . . . . . . 7.5 mg.
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(warning: may be habit forming)
Alcohol, 3.5%

Non-narcotic for 6-8 hour cough control
ROBITUSSIN®-DM
Each 5 cc. contains:
Glyceryl guaiacolate . . . . . . 100 mg.
Dextromethorphan hydrobromide . 15.0 mg.
Alcohol, 1.4%

New! Clears sinuses and nasal stuffiness as it relieves cough
ROBITUSSIN®-PE
Each 5 cc. contains:
Glyceryl guaiacolate . . . . . . 100 mg.
Phenylephrine hydrochloride . . . 10.0 mg.
Alcohol, 1.4%

	ROBITUSSIN	ROBITUSSIN A-C	ROBITUSSIN-DM	ROBITUSSIN-PE
EXPECTORANT	●	●	●	●
DEMULCENT	●	●	●	●
COUGH SUPPRESSANT		●	●	
ANTIHISTAMINE		●		
LONG-ACTING (6-8 HOURS)			●	
NASAL, SINUS DECONGESTANT				●

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A-H-ROBINS

Synirin provides prompt barbiturate potentiation of aspirin without limiting the therapeutic usage of aspirin. Both pentobarbital and aspirin begin their action together promptly and last 4 or 5 hours. There is no accumulation.

LITERATURE AND CLINICAL SUPPLY AVAILABLE TO PHYSICIANS

SYNIRIN *is another pharmaceutical achievement*

WM. P. POYTHRESS & CO., INC.
RICHMOND, VIRGINIA 23217
Manufacturers of ethical pharmaceuticals since 1856

Synirin®

ACETYLSALICYLIC ACID (ASPIRIN)..... 5 GR.
*PENTOBARBITAL (ACID)............ 1/8 GR.
Warning: may be habit-forming

He leaves to make an urgent call But doesn't use the phone at all

Parepectolin for quick relief of acute diarrhea
...soothes colicky pain with paregoric
...consolidates fluid stools with pectin
...adsorbs irritants with kaolin, and protects intestinal mucosa.

Whether it's a 24-hour "bug", a food problem, or simply nervousness and anxiety, Parepectolin will bring the diarrhea under control until etiology can be determined. In some cases, Parepectolin may be all the therapy necessary.

Parepectolin®

Each fluid ounce of creamy white suspension contains:
Paregoric (equivalent).........(1.0 dram) 3.7 ml.
Contains opium (¼ grain) 15 mg. per fluid ounce.
warning: may be habit forming
Pectin .... (2½ grains) 162 mg.
Kaolin (specially purified)....(85 grains) 5.5 Gm.
(alcohol 0.69%)
Usual Adult Dose: One or two tablespoonfuls three times daily.

RORER
WILLIAM H. RORER, INC.
Fort Washington, Pa.

What joy can equal this one . . .

. . . the joy of being back with your child. For some mothers this will never be. For many mentally sick people, even the new treatment methods do not work. More research is needed to find ways to save all the victims of mental illness. Please help this important work. Help speed the day that we'll be rid of mental illness.

Give to the National Association for Mental Health through your local chapter.

NATIONAL ASSOCIATION FOR MENTAL HEALTH MH

removes the mental blur

that clouds vision

SOLFOTON®

Each tablet or capsule contains
PHENOBARBITAL . . . . 16 mg.
(Warning: may be habit forming)
BENSULFOID® (See P D R) . . . . . 65 mg.
Precaution: same as 16 mg. of phenobarbital

Constructive Therapy

A Solfoton tablet or capsule at 6 hour intervals maintains sedation at the threshold of calmness, sustaining a mental climate for purposeful living.

Literature and clinical samples sent upon request.

FEDERAL LAW PROHIBITS DISPENSING
WITHOUT PRESCRIPTION

AVAILABLE

Solfoton *(yellow, uncoated tablets "P")*
100s, 500s, 5000s
Solfoton Capsules *(yellow and brown)*
100s, 500s, 1000s
Solfoton S/C *(sugar-coated beige tablets)*
100s, 500s, 4000s

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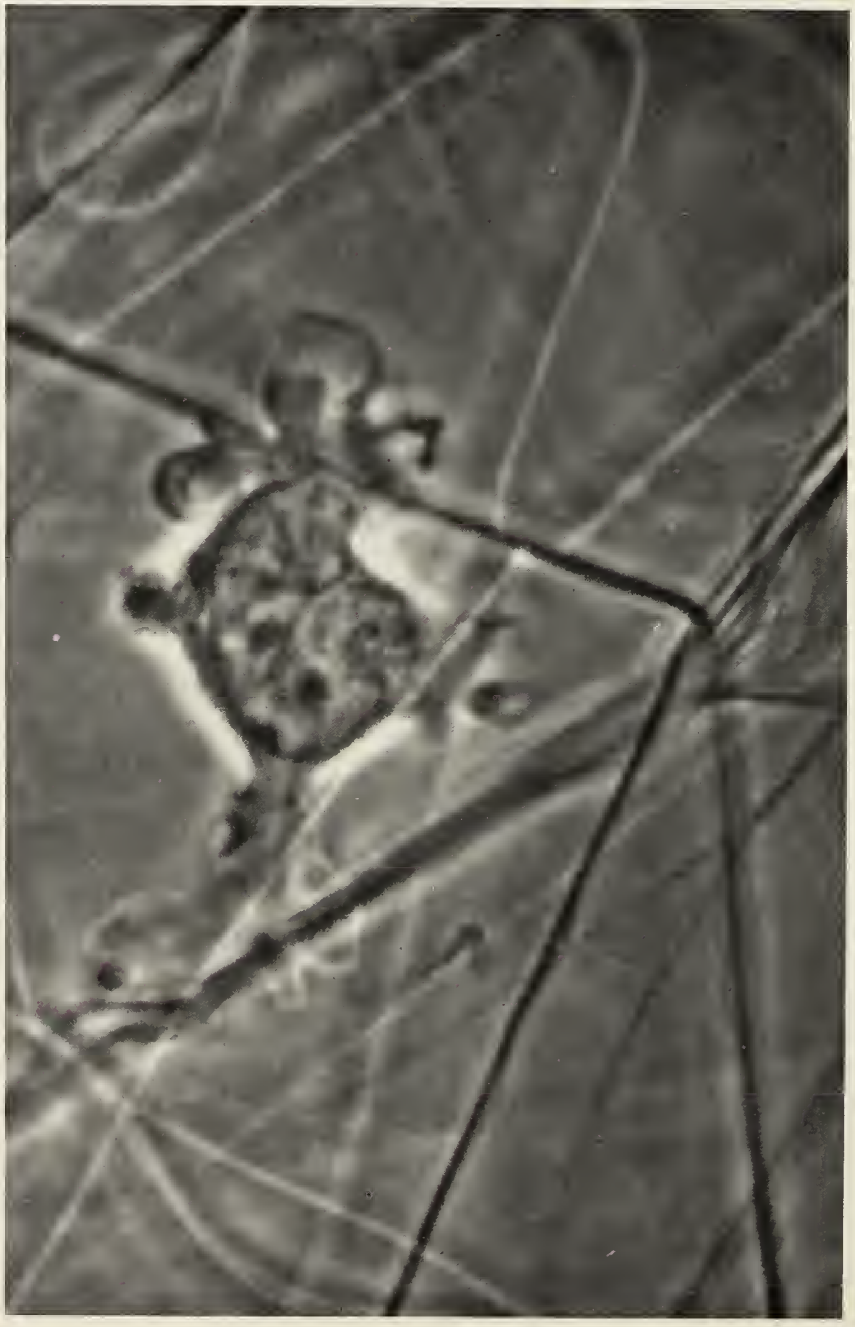
Manufacturers of ethical pharmaceuticals since 1856

INFLAMMATION:
A cellular fight for life

A SYNTEX REPORT based on recently developed hypotheses about topical corticosteroids, including the cellular theories of inflammation by Thomas F. Dougherty, Ph.D., University of Utah.

You are looking at a fibroblast fighting for life. This cell—one of the most common found in connective tissue—has literally been poisoned by cytotoxins released from other cells that have ruptured. Soon, if the abnormal activity of this fibroblast does not cease, it, too, will rupture and die—one more casualty in the inflammatory wave of destruction precipitated by injury.

Until a short time ago no one had ever witnessed such a scene at the cellular level. Now, through advanced cinemicrographic techniques, it is possible to view and photograph the inflammatory process as produced experimentally in living animal tissue. This method permits new insight into the mechanism of inflammation and the role of corticosteroids in therapeutic management. Equally important, these techniques shed new light on factors that may make one corticosteroid more effective than another—factors that can be correlated with other chemical, biologic, and clinical parameters.

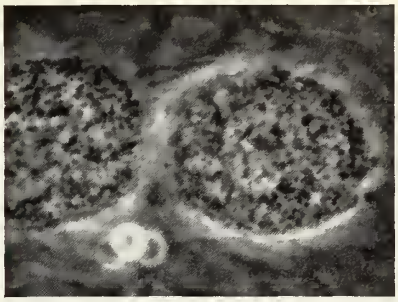


Visual evidence of how corticosteroids influence the inflammatory reaction

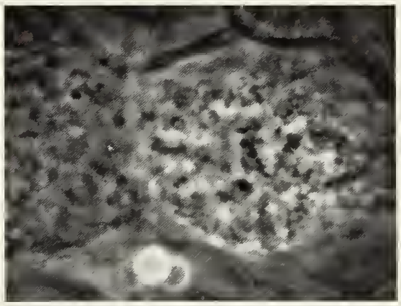
Working with phase-contrast cinemicrography on living animal tissue, Doctors Thomas F. Dougherty and David Berliner of the University of Utah College of Medicine have actually filmed cellular events that occur during the inflammatory reaction. This remarkable study* and additional work by these investigators, as well as by others, have established a new theoretical biologic basis for the antiinflammatory effect of the corticosteroids. (It must be noted that other theories, such as the lysosome or so-called "suicide bag" theory, have been postulated, although it is quite likely that there are more similarities than differences among the various theoretical models.)

The inflammatory wave of destruction

In this investigation an injurious injection of gelatin is used to set off an inflammatory reaction in living mouse tissue. What follows is a wave of destructive cellular activity that comprises the inflammatory response to injury. Mast cells (which contain heparin, serotonin and histamine) take up water, swell and rupture, releasing their contents, which are toxic outside the mast cell wall. These toxins, in turn, cause disintegration of other cells (such as fibroblasts) and the release of additional toxic material. Capillaries, too, take up water and leak unformed blood elements, causing edema. And polymorphonuclears, lymphocytes and perithelial cells invade the inflamed site. As a result of all these changes, the cellular environment reaches a state of turmoil.



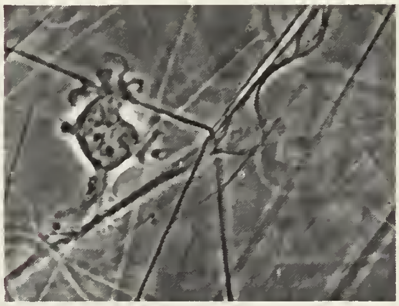
Phase-contrast microscopy showing mast cell before injury.



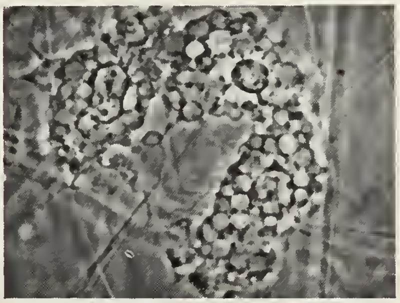
Mast cell (after injury) has broken up and released cytotoxins.

How corticosteroids change the picture

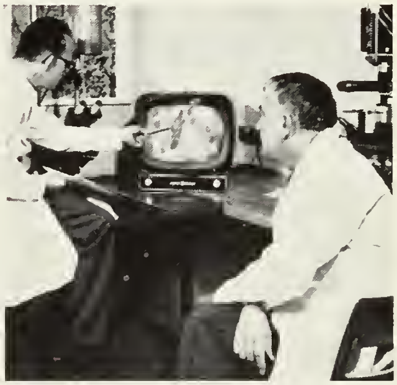
Corticosteroids appear to virtually stop the abnormal cellular activity that constitutes the inflammatory reaction. This permits the body's natural resources to clear up the inflamed area and repair the damaged tissue. This interpretation is supported by the fact that when the injurious gelatin solution is injected simultaneously with a corticosteroid – Synalar (fluocinolone acetonide) – the inflammatory pattern simply does not develop.



Fibroblast in high state of activity, much distorted.



Mast cells showing effects of corticosteroid action: cells are normal in size, shape and activity.



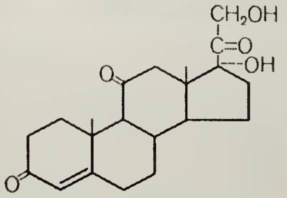
In summarizing his study Doctor Dougherty states: "...we also feel this work may explain why one corticosteroid helps a patient more rapidly and effectively than another. If it does, it is because one corticosteroid is the fastest, most effective inhibitor of the series of inflammatory events at the tissue level."

**A New View of Corticosteroid Action in Inflammatory Dermatoses*, a film based on this study, is now available from your Syntex representative.

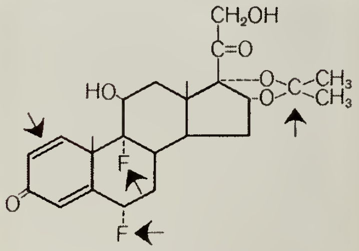
See last page for contraindications, precautions, side effects and dosage.

How advances in chemical design have achieved greater steroid potency

The chemical modification of corticosteroid molecules from the advent of hydrocortisone to the development of Synalar (fluocinolone acetonide) is a prime example of how biochemists can "design" to increase therapeutic activity and minimize undesirable side actions. Below, for example, we see the important changes that were made in reference to the hydrocortisone molecule to produce fluocinolone acetonide, one of the most active of all topical corticosteroids. As a result, a 0.01% preparation of Synalar (fluocinolone acetonide) has been reported to do the work of a 1% hydrocortisone product containing 100 times more cortiscosteroid. And it can often do it more effectively.



Hydrocortisone

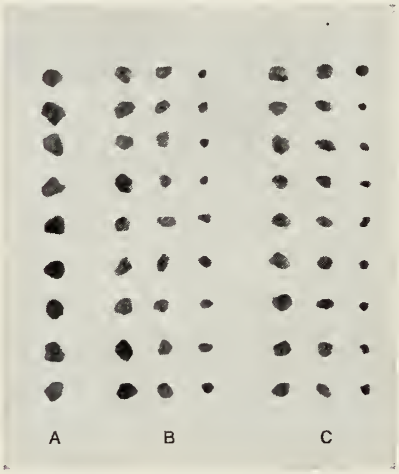


Fluocinolone Acetonide (Synalar)

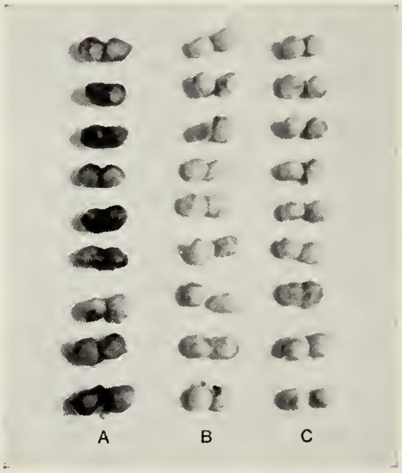
- ☐ *a double bond between carbons 1 and 2*
- ☐ *fluorine substitutions at* both *the 6-α, and the 9-α positions*
- ☐ *the addition of the acetonide at the 16-α, 17-α positions, thus providing one of the most potent topical corticosteroids available.*

How bioassay tests are used to "predict" therapeutic potential

Biologic assays are another tool used by researchers to help establish the relative activity of corticosteroids. To date no single method of assaying corticosteroid activity has emerged as the ideal "yardstick" for predicting therapeutic potential. Taken together, however, these methods have proved useful. When such tests are run on various corticosteroids, a definite order of corticosteroid activity becomes evident. Compounds with the highest order of activity may be expected to merit clinical trial to establish their high therapeutic potential. When assayed by these methods, fluocinolone acetonide (Synalar) emerges as one of the most active topical corticosteroids, milligram for milligram, available for clinical application today.



The Thymus Involution Assay[1-4] is run on adrenalectomized rats. The sizes of the glands are measured, and the degree of involution caused by the steroid is determined as an indication of its potency. In the above photo, the comparative involution of thymus glands achieved with hydrocortisone and Synalar (fluocinolone acetonide) is shown. Untreated controls (A) show normal size. Group B – injected with 1, 2 and 4 mg. of hydrocortisone – show progressively smaller thymuses as does Group C – injected with fluocinolone acetonide – but with only 1/500th the dose of hydrocortisone.



The Antigranuloma Assay[1-4] also utilizes adrenalectomized rats. Granulomas are induced by subcutaneous implantation of cotton pellets on either side of the thorax. The degree of granuloma inhibition achieved by a steroid reflects its potency. The above photo shows the inhibition of granuloma formation achieved with hydrocortisone and Synalar (fluocinolone acetonide). Untreated controls (A) show large, red granulomas adhering to the pellets. Group B, receiving hydrocortisone and Group C, receiving fluocinolone acetonide, show little, if any, granuloma formation. Fluocinolone acetonide produced the same effect as hydrocortisone with only 1/500th the dose. This assay, as well as the thymus involution assay, measures systemic rather than topical corticosteroid activity. Nevertheless, results by these methods correlate well with other assays and with the milligram potencies of topical steroids in current clinical use.

Worldwide clinical experience confirms the predictable therapeutic potential of Synalar

It is particularly gratifying that the promise of the advanced chemical design and high order of bioassay activity of Synalar (fluocinolone acetonide) has been confirmed by widespread therapeutic application. Indeed, the impressive clinical response rate of Synalar has been documented in no fewer than 232 papers from 22 countries.

Representative Clinical Results with Synalar*

Efficacy Documented in over 4,000 Patients

Condition	Number of Publications	Number of Patients	Significant Improvement†
Contact Dermatitis	27	750	713
Eczematous Dermatitis	21	472	409
Seborrheic Dermatitis	18	442	426
Atopic Dermatitis	24	460	426
Psoriasis	36	1,699	1,510
Neurodermatitis	18	351	324
Total	144	4,174	3,808

*Complete bibliography on request.

†Expressed by the authors as excellent, very good, good, complete remission of inflammation, etc.

PRESCRIBING INFORMATION
For initiation of therapy: Cream 0.025%, 5 and 15 Gm. tubes, 425 Gm. jars; *for emollient effect:* Ointment 0.025%, 15 Gm. tubes; *for maintenance therapy:* Cream 0.01%, 15 and 45 Gm. tubes, 120 Gm. jars; *for intertriginous or hairy sites:* Solution 0.01%, 20 cc. and 60 cc. plastic squeeze bottles; *for infected inflammatory dermatoses:* Neo-Synalar® Cream (0.025% fluocinolone acetonide, neomycin sulfate, equivalent to 0.35% neomycin base), 5 and 15 Gm. tubes. CONTRAINDICATIONS: Tuberculous, fungal, and most viral lesions of the skin, (including herpes simplex, vaccinia, and varicella). Not for ophthalmic use. Contraindicated in individuals with a history of hypersensitivity to any of the components. PRECAUTIONS: Synalar preparations are virtually nonsensitizing and nonirritating. However, the solution may produce burning or stinging when applied to denuded or fissured areas. In some patients with dry lesions, the solution may increase dryness, scaling or itching. While topical steroids have not been reported to have an adverse effect on pregnancy, the safety of their use on pregnant females has not absolutely been established. Therefore, they should not be used extensively on pregnant patients, in large amounts, or for prolonged periods of time. Prolonged use of any antibiotic may result in overgrowth of nonsusceptible organisms; if this occurs, appropriate therapy should be instituted. When severe local infection or systemic infection exists, the use of systemic antibiotics should be considered, based on susceptibility testing. SIDE EFFECTS: Side effects are not ordinarily encountered with topically applied corticosteroids. As with all drugs, however, a few patients may react unfavorably to Synalar under certain conditions. The neomycin in Neo-Synalar Cream rarely produces allergic reactions.

REFERENCES: 1. Lerner, L. J., Bianchi, A., Turkheimer, A. R., Singer, F. M., and Borman, A.: Anti-inflammatory steroids: potency, duration and modification of activities. Ann NY Acad Sci 116:1071 (Aug. 27) 1964. 2. Idem: Comparison of anti-granuloma, thymolytic and glucocorticoid activities of anti-inflammatory steroids. Proc Soc Exp Biol Med 116:385 (June) 1964. 3. Ringler, A.: Activities of adrenocorticosteroids in experimental animals and man, in Dorfman, R. I.: Methods of hormone research, New York, Academic Press, 1964. vol. III. pp. 234-280. 4. Gubersky, V. R.: To be published.

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LABORATORIES INC., PALO ALTO, CALIF.

For inflammatory dermatoses... by any measure a topical corticosteroid of choice

Synalar®
(fluocinolone acetonide)

Milligram for milligram one of the most active topical corticosteroids available

Rapid and predictable in antiinflammatory and antipruritic activity

Results often comparable to those of systemic corticosteroids with fewer hazards

From a continuing study on nasal congestion . . .

timed to work while your patient does

A study being conducted by the Department of Otolaryngology, Greater Baltimore Medical Center is stockpiling evidence that points to the fast action and prolonged relief effected by Triaminic in the treatment of nasal congestion.

Begun in March 1966, the study to date has encompassed 85 patients with common nasal disorders—and measured their response to recommended doses of Triaminic tablets.

Timed to release its oral nasal decongestant and two antihistamines within 8 hours, Triaminic was found to effect partial or complete relief in better than 82% of the subjects treated. Clearing nasal obstruction. Reducing turbinate swelling. Making breathing easier.

It's a comforting thing to know that Triaminic *really* works.

Triaminic® *timed-release tablets*

Each timed-release tablet contains:

Phenylpropanolamine hydrochloride .... 50mg. Pyrilamine maleate .... 25mg. Pheniramine maleate .... 25mg.

Side effects: Occasional drowsiness, blurred vision, cardiac palpitations, flushing, dizziness, nervousness or gastrointestinal upsets.

Precautions: The patient should be advised not to drive a car or operate dangerous machinery if drowsiness occurs. Use with caution in patients with hypertension, heart disease, diabetes or thyrotoxicosis.

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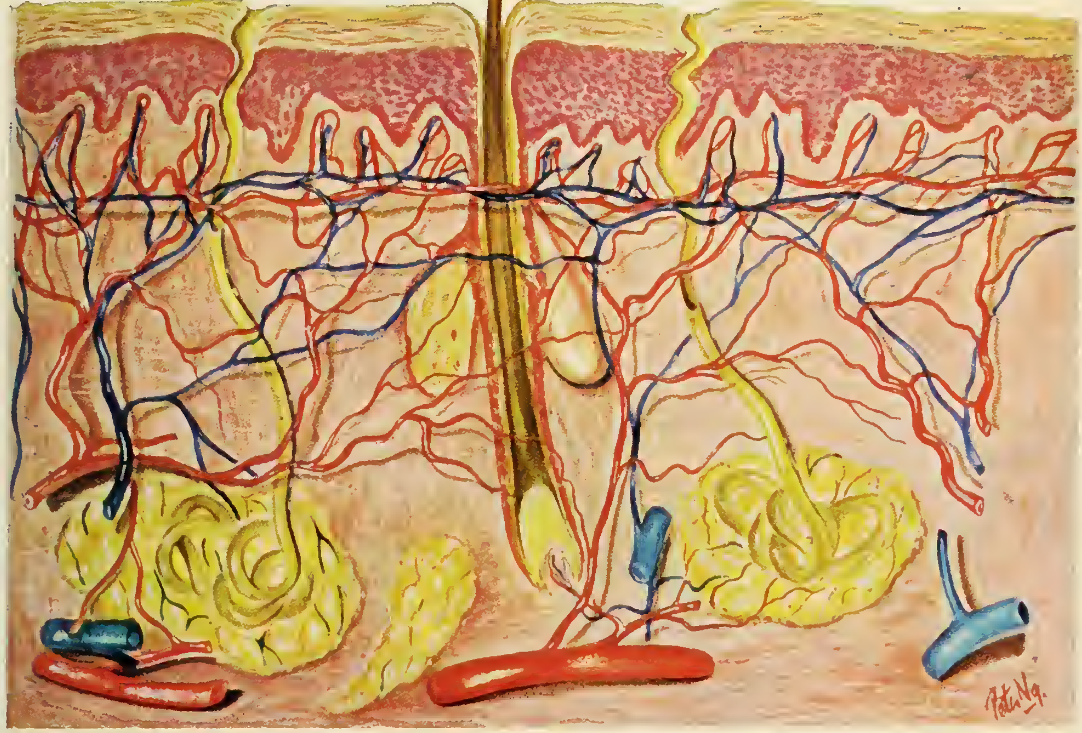
JUDGE ANTIBIOTIC OINTMENTS HERE



Results on skin are final proof of any topical antibiotic's effectiveness

No in vitro test can duplicate a clinical situation on living skin. 'Neosporin' (polymyxin B —bacitracin—neomycin) Ointment has consistently proven its effectiveness in thousands of cases of bacterial skin infection. The spectra of the three antibiotics overlap in such a way as to provide bactericidal action against most pathogenic bacteria likely to be found topically. Diffusion of the antibiotics from the special petrolatum base is rapid since they are insoluble in the petrolatum, but readily soluble in tissue fluids. The Ointment is bland and nonirritating.

Caution: As with other antibiotic preparations, prolonged use may result in overgrowth of nonsusceptible organisms and/or fungi. Appropriate measures should be taken if this occurs. Articles in the current medical literature indicate an increase in the prevalence of persons allergic to neomycin. The possibility of such a reaction should be borne in mind.
Contraindications: This product is contraindicated in those individuals who have shown hypersensitivity to any of its components.
Supplied: Tubes of 1 oz., ½ oz. with applicator tip, and ⅛ oz. with ophthalmic tip.
Complete literature available on request from Professional Services Dept. PML.

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POLYMYXIN B-BACITRACIN-NEOMYCIN
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The full ¼ grain of phenobarb in the formula
takes the nervous edge off the pain
...helps bring out the best in codeine

Phenaphen® with Codeine the only leading compound analgesic that calms instead of caffeinates

Each capsule contains:
Phenobarbital (¼ gr.) .... 16.2 mg.
(Warning: may be habit forming)
Aspirin (2½ gr.) ....162.0 mg.
Phenacetin (3 gr.) ....194.0 mg.
Hyoscyamine sulfate ....0.031 mg.
Codeine phosphate.............¼ gr. (No. 2), ½ gr. (No. 3), 1 gr. (No. 4)
(Warning: may be habit forming)

Contraindications: Hypersensitivity to any ingredient.

Precautions: As with all phenacetin-containing products, avoid excessive or prolonged use.

Side Effects: Side effects are uncommon—nausea, constipation, and drowsiness have been reported.

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SUGAR FREE
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ARTIFICIALLY SWEETENED CARBONATED BEVERAGE
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LESS THAN 1 CALORIE PER BOTTLE
12 FLUID OUNCES
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ARTIFICIALLY SWEETENED CARBONATED BEVERAGE
LESS THAN 1 CALORIE PER CAN

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Diet-Rite Cola . . . America's Number One low-calorie cola . . . no sugar at all . . . less than one calorie per bottle . . . the one with the wonderful taste of cola . . . pH approximately 2.6 to 2.8 . . . same general range acidity as other cola beverages plus number of fruit juices.

You will like Diet-Rite Cola. So will your patients.

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when he just can't sleep

Tuinal®

One-Half Sodium Amobarbital and
One-Half Sodium Secobarbital
supplied in ¾, 1½, and 3-grain Pulvules®

Tuinal helps wakeful patients fall asleep fast, stay asleep all night.

Indications: Tuinal is indicated for prompt and moderately long-acting hypnosis. It is not suitable for continuous daytime sedation.

Contraindications: Barbiturates should not be administered to anyone with a history of porphyria, nor should they be given in the presence of uncontrolled pain, because excitement may result.

Warning: May be habit-forming.

Precautions: Tuinal should be used cautiously in patients with decreased liver function, since prolongation of effect may occur.

Adverse Reactions: Idiosyncrasy, such as excitement, hangover, or pain, may appear. Hypersensitivity reactions occur in some patients, especially in those with asthma, urticaria, or angioneurotic edema.

Overdosage: C.N.S. depression. Symptoms—Depression of respiration and of superficial and deep reflexes, slight constriction of the pupils (in severe poisoning, dilation), decreased urine formation, lowered body temperature, coma. Treatment—Symptomatic and supportive (gastric lavage; intravenous fluids; maintenance of blood pressure, body temperature, and adequate respiration). Dialysis may speed removal of barbiturates from body fluids.

Dosage: 50-200 mg. (¾-3 grains) at bedtime.

[031767]

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The rehabilitation program for alcoholics at Fairview has drawn patients from 20 states and every county in South Carolina, from Cuba, Canada, Germany, Europe.

It combines medicine, psychology, and religion with work therapy, group therapy, personal counselling, a 30 day program.

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Fairfield Home, a 65 bed Class I nursing home fully accredited by the American Joint Commission on Accreditation, certified for Medicare. Non-discrimination because of race, color, or creed.

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For better care, greater concern, by people who care.

DUAL PROBLEM IN PEPTIC ULCER

Relief of hyperacidity is still a primary goal in the treatment of peptic ulcer. And antacids are the most widely used means of achieving this relief. But antacids alone cannot influence the distention and bloating which so often add to ulcer distress.

THIS IS WHY MYLANTA® PROVIDES:

the two most widely used antacids—magnesium and aluminum hydroxides—to help secure rapid acid neutralization with little chance of laxation or constipation;

PLUS

the defoaming action of simethicone—to help relieve the painful gas symptoms which often accompany peptic ulcer.

Mylanta®

antacid therapy plus an added benefit

nonfatiguing flavor/smooth pleasant texture; both assure patient cooperation during long-term therapy.

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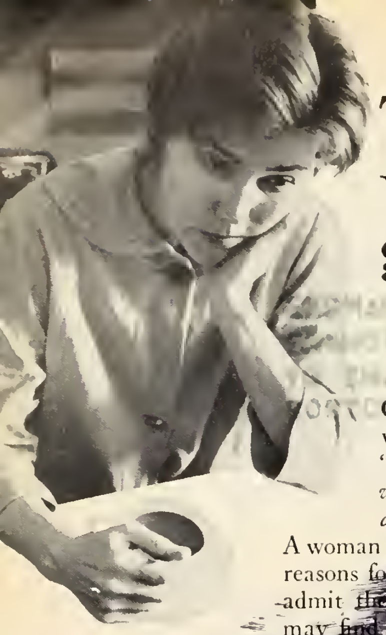
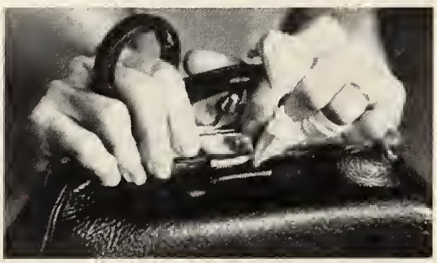


Tears without grief

Crying Spells–psychic tension with depressive symptoms?

"I don't know what's the matter with me lately...I cry and I cry... and I really don't know why I do."

A woman often is not conscious of the real reasons for her crying spells or refuses to admit them to herself. On probing, you may find that frequent weeping, like insomnia or neurotic fatigue, often is an expression of psychic tension. She needs sympathy and reassurance, and perhaps a calming agent to help her over her crisis. Consider prescribing Valium (diazepam) for her. It usually reestablishes calmness promptly. Crying spells and other secondary depressive symptoms normally subside as the tension is relieved. Your patient then can cope more easily with stresses to which she is subjected. Valium (diazepam) is generally well tolerated, and on proper maintenance dosage usually does not impair mental acuity or ability to function. If side effects such as ataxia and drowsiness occur, they usually disappear with dosage adjustment. •



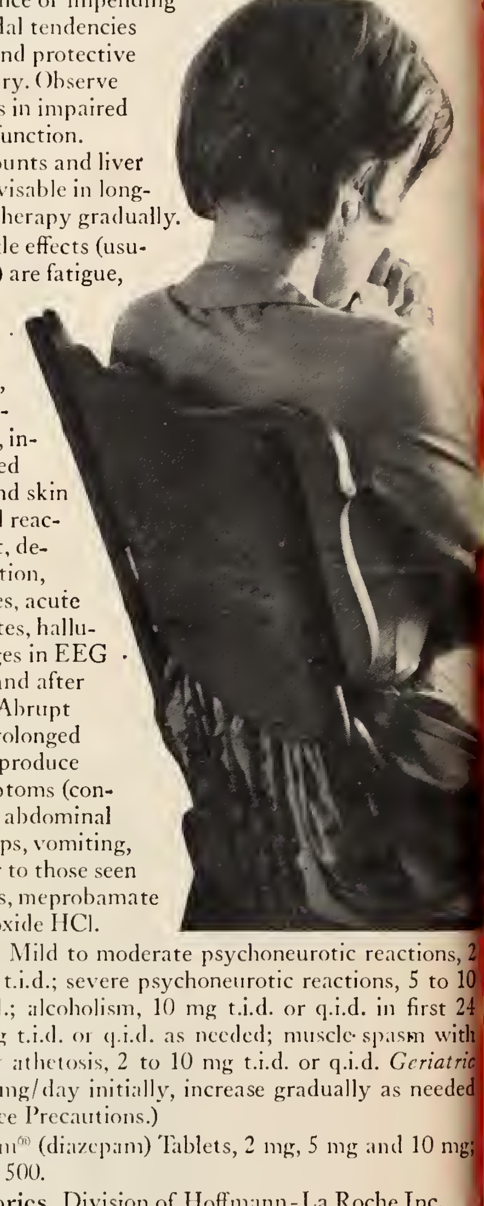
Before prescribing, please consult complete product information, a summary of which follows:

Contraindications: Infants, patients with history of convulsive disorders, glaucoma or known hypersensitivity to drug.

Warning: Not of value in the treatment of psychotic patients, and should not be employed in lieu of appropriate treatment.

Precautions: Limit dosage to smallest effective amount in elderly or debilitated patients (not more than 1 mg, one or two times daily initially) to preclude ataxia or oversedation, increasing gradually as needed or tolerated. As is true of all CNS-acting drugs, until correct maintenance dosage is established, advise patients against possibly hazardous procedures requiring complete mental alertness or physical coordination. Driving during therapy not recommended. In general, concurrent use with other psychotropic agents is not recommended. If such combination therapy is used, carefully consider individual pharmacologic effects—particularly with known compounds which may potentiate action of Valium (diazepam), such as phenothiazines, barbiturates, MAO inhibitors and other antidepressants. Advise patients against simultaneous ingestion of alcohol or other CNS depressants. Safe use in pregnancy not established. Employ usual precautions in treatment of anxiety states with evidence of impending depression; suicidal tendencies may be present and protective measures necessary. Observe usual precautions in impaired renal or hepatic function. Periodic blood counts and liver function tests advisable in long-term use. Cease therapy gradually.

Side Effects: Side effects (usually dose-related) are fatigue, drowsiness and ataxia. Also reported: mild nausea, dizziness, blurred vision, diplopia, headache, incontinence, slurred speech, tremor and skin rash; paradoxical reactions (excitement, depression, stimulation, sleep disturbances, acute hyperexcited states, hallucinations); changes in EEG patterns during and after drug treatment. Abrupt cessation after prolonged overdosage may produce withdrawal symptoms (convulsions, tremor, abdominal and muscle cramps, vomiting, sweating) similar to those seen with barbiturates, meprobamate and chlordiazepoxide HCl.



Dosage: *Adults:* Mild to moderate psychoneurotic reactions, 2 to 5 mg b.i.d. or t.i.d.; severe psychoneurotic reactions, 5 to 10 mg t.i.d. or q.i.d.; alcoholism, 10 mg t.i.d. or q.i.d. in first 24 hours, then 5 mg t.i.d. or q.i.d. as needed; muscle spasm with cerebral palsy or athetosis, 2 to 10 mg t.i.d. or q.i.d. *Geriatric patients:* 1 or 2 mg/day initially, increase gradually as needed and tolerated. (See Precautions.)

Supplied: Valium® (diazepam) Tablets, 2 mg, 5 mg and 10 mg; bottles of 50 and 500.

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Valium®
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useful for the relief of psychic tension with associated depressive symptoms

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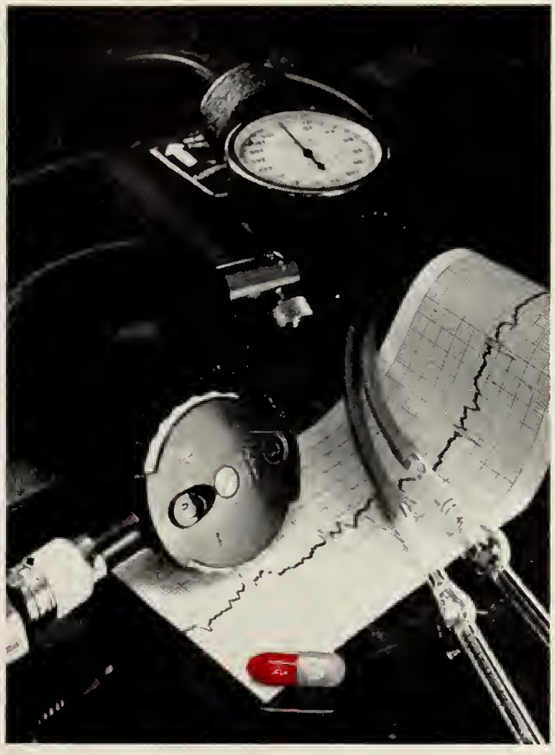

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Length—Short articles of about 2,500 words (about 8 typewritten pages, double spaced) are preferred. Longer articles ordinarily will defer to the shorter ones in schedule of publication.

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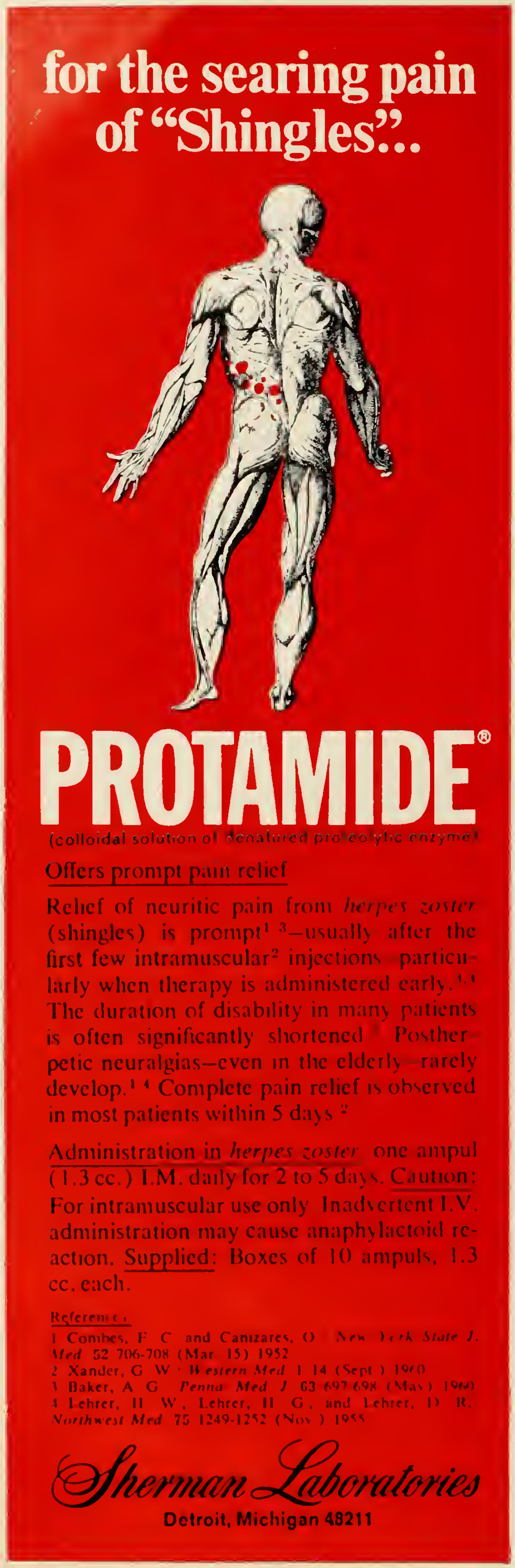

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Relief of neuritic pain from *herpes zoster* (shingles) is prompt[1-3]—usually after the first few intramuscular[2] injections particularly when therapy is administered early.[1,4] The duration of disability in many patients is often significantly shortened Postherpetic neuralgias—even in the elderly—rarely develop.[1,4] Complete pain relief is observed in most patients within 5 days [2]

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References

1 Combes, F C and Canizares, O *New York State J. Med* 52 706-708 (Mar 15) 1952
2 Xander, G W *Western Med* 1 14 (Sept) 1960
3 Baker, A G *Penna Med J* 63 697-698 (May) 1960
4 Lehrer, H W, Lehrer, H G, and Lehrer, D R. *Northwest Med* 75 1249-1252 (Nov) 1955

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Contraindications: Edema; danger of cardiac decompensation; history or symptoms of peptic ulcer; renal, hepatic or cardiac damage; history of drug allergy; history of blood dyscrasia. The drug should not be given when the patient is senile or when other potent drugs are given concurrently. Large doses of Butazolidin alka are contraindicated in glaucoma.

Warning: If coumarin-type anticoagulants are given simultaneously, watch for excessive increase in prothrombin time. Instances of severe bleeding have occurred. Pyrazole compounds may potentiate the pharmacologic action of sulfonylurea, sulfonamide-type agents and insulin. Carefully observe patients receiving such therapy. Use with great caution in the first trimester of pregnancy.

Precautions: Before prescribing, carefully select patients, avoiding those responsive to routine measures as well as contraindicated patients. Obtain a detailed history and a complete physical and laboratory examination, including a blood count. The patient should not exceed recommended dosage, should be closely supervised and should be warned to discontinue the drug and report immediately if fever, sore throat, or mouth lesions (symptoms of blood dyscrasia); sudden weight gain (water retention); skin reactions; black or tarry stools or other evidence of intestinal hemorrhage occur. Make regular blood counts. Discontinue the drug immediately and institute countermeasures if the white count changes significantly, granulocytes decrease, or immature forms appear. Use greater care in the elderly and in hypertensives.

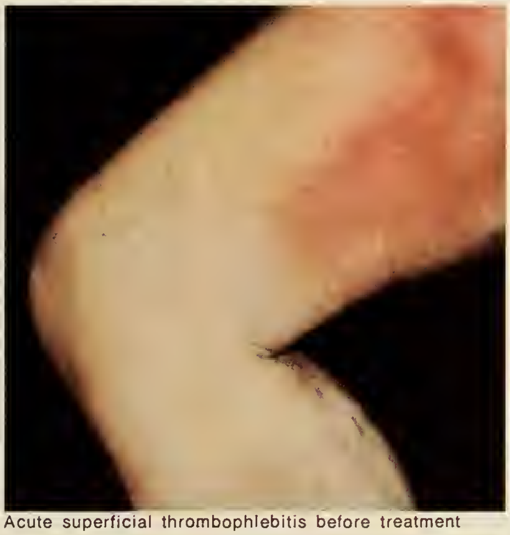
Adverse Reactions: The most common are nausea, edema and drug rash. Swelling of the ankles or face may be minimized by withholding dietary salt, reduction in dosage or use of diuretics. In elderly patients and in those with hypertension the drug should be discontinued with the appearance of edema. The drug has been associated with peptic ulcer and may reactivate a latent peptic ulcer. The patient should be instructed to take doses immediately before or after meals or with milk to minimize gastric upset. Mild drug rashes frequently subside with reduction of dosage. However, rash accompanied by fever or other systemic reactions usually requires withholding medication. Purpuric rash has also been reported. Agranulocytosis, exfoliative dermatitis, Stevens-Johnson syndrome, or a generalized allergic reaction similar to serum sickness may occur and require permanent withdrawal of medication. Stomatitis, salivary gland enlargement, vomiting, vertigo and languor may occur. Leukemia and leukemoid reactions have been reported. While not definitely attributable to the drug, a causal relationship cannot be excluded. Thrombocytopenic purpura and aplastic anemia may occur. Confusional states, agitation, headache, blurred vision, optic neuritis and transient hearing loss have been reported, as have hyperglycemia, hepatitis, jaundice, and several cases of anuria and hematuria. With long-term use, reversible thyroid hyperplasia may occur infrequently. Moderate lowering of the red cell count due to hemodilution may occur.

Dosage in Acute Superficial Thrombophlebitis: Initial: 6 capsules or tablets daily in divided doses for 2 or 3 days. Maintenance: 3 capsules or tablets daily. Usual duration of therapy is 5 to 7 days (rarely beyond 10 days). 6509-V(B)R2

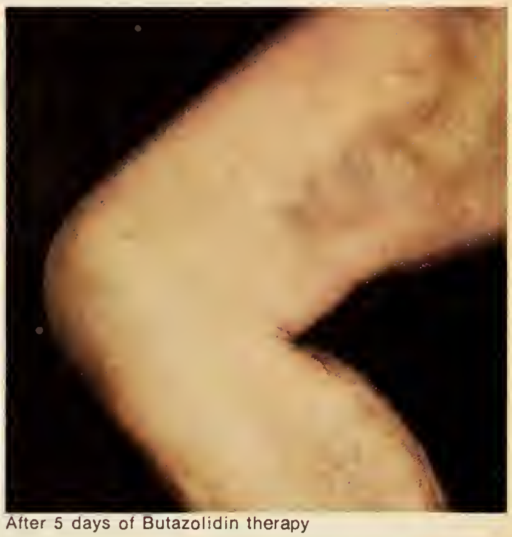
*Stein, I.D.: Presented at the American Academy of General Practice, Dallas, Sept. 1967.

For complete details, please see full prescribing information.

it used to take weeks



Acute superficial thrombophlebitis before treatment



After 5 days of Butazolidin therapy

In acute superficial thrombophlebitis, patients were usually bedfast for 2 to 4 weeks, tying up hospital beds, requiring costly nursing care and time-consuming procedures such as warm soaks and packs.

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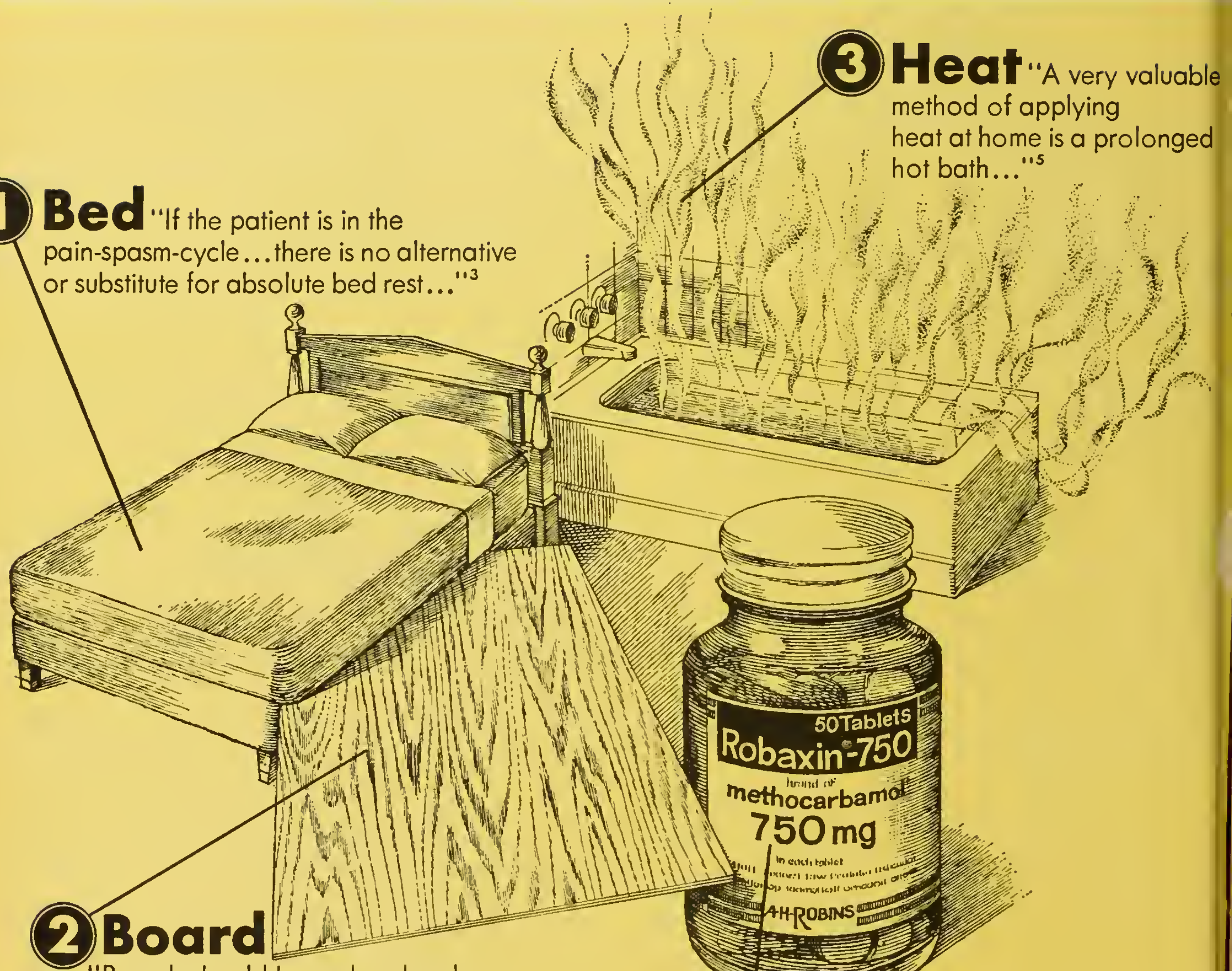

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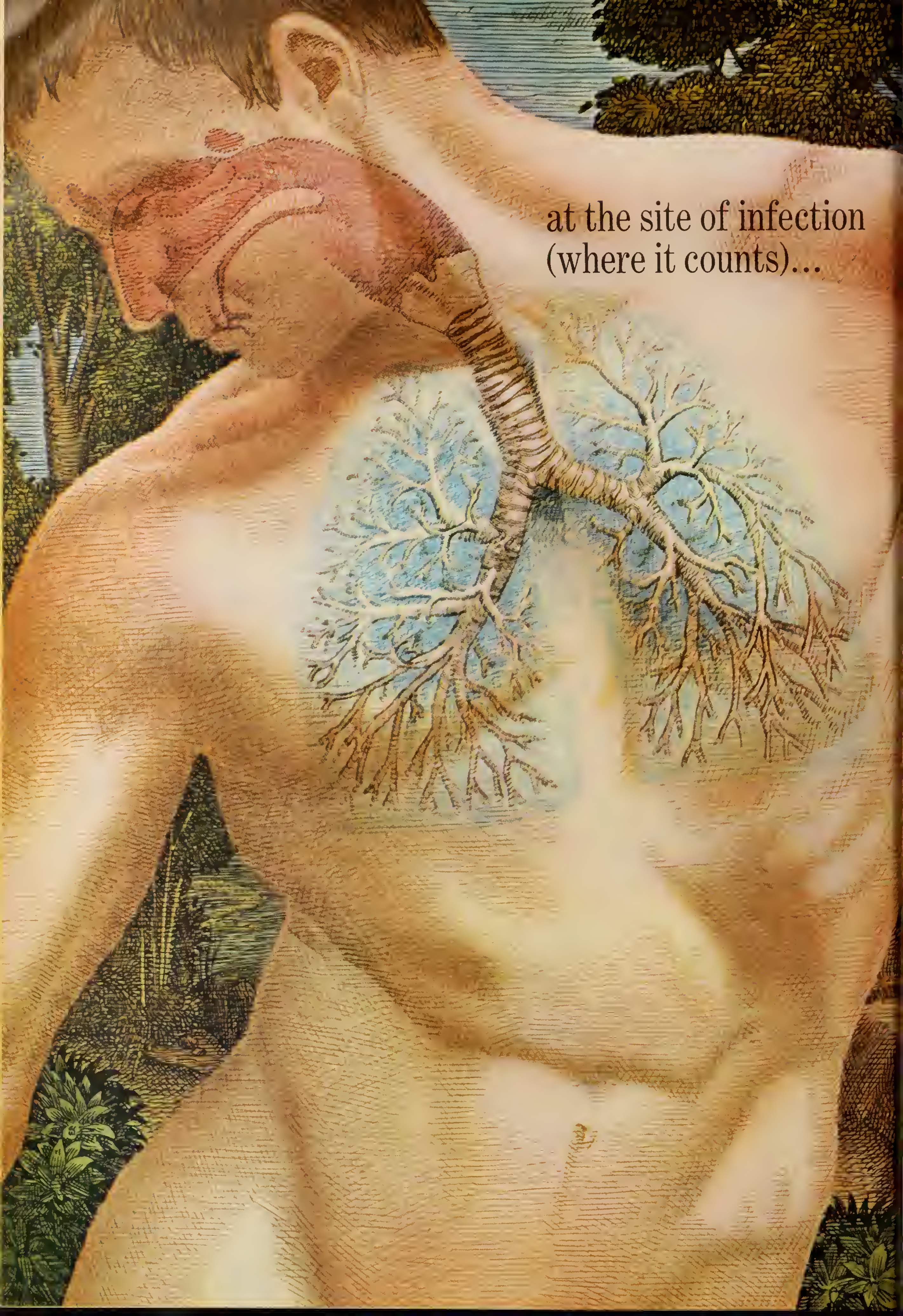
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Indications: Ilosone is indicated in infections caused by micro-organisms sensitive to its action—especially staphylococci, hemolytic streptococci, and pneumococci.

It has been effective in streptococcus infections, particularly acute bacterial pharyngitis and tonsillitis; staphylococcus disease, including soft-tissue infections, furunculosis, abscesses, cellulitis, carbuncles, and wound infections; pneumococcus pneumonia and acute bronchitis with pneumococci on culture, bronchopneumonia, and otitis media.

In serious staphylococcus infections, erythromycin preparations should be used only in combination therapy with other antimicrobial agents; surgical procedures should be performed when indicated, and large doses of the antimicrobial agents should be employed.

Penicillin is the drug of choice for syphilis and gonorrhea, but Ilosone in multiple 500-mg. doses has been useful in patients with a history of penicillin allergy. Also, other infections due to susceptible bacteria in patients hypersensitive to penicillin or other antibiotics may be considered for treatment with Ilosone.

Contraindications: Known history of sensitivity to this drug; preexisting liver disease or dysfunction.

Adverse Reactions: Hepatic dysfunction with or without clinical jaundice has been reported infrequently. Changes in liver function tests indicative of intrahepatic cholestasis appear to be the result of individual idiosyncrasy. Findings subsided when treatment was discontinued. Occasionally, symptoms simulated extrahepatic obstructive jaundice or the colic of biliary tract disease.

When jaundice appeared to be related to use of the drug, laboratory findings were characterized by increased direct-reacting bilirubin, elevated alkaline phosphatase levels, negative or weakly positive cephalin flocculation and thymol turbidity tests, elevated serum glutamic oxalacetic transaminase levels, peripheral eosinophilia, and normal cholecystograms.

Gastro-intestinal disturbances not associated with hepatic effects and occasional allergic manifestations (urticaria, skin eruptions, and, rarely, anaphylaxis) have been reported. The normal intestinal gram-negative bacterial flora is not appreciably altered by erythromycin drugs.

Administration and Dosage: Ilosone is administered orally.

Infants and children under twenty-five pounds, 5 mg. per pound every six hours; twenty-five to fifty pounds, 125 mg. every six hours. Adults and children over fifty pounds, 250 mg. every six hours.

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In syphilis, a total of 20 to 30 Gm. is administered in divided doses for ten to fifteen days. Close follow-up is necessary since erythromycin drugs have not had adequate evaluation in all stages of syphilis. Examination of spinal fluid is recommended during follow-up.

In gonorrhea, the dosage is 500 mg. four times a day for four days. Patients with a suspected lesion of syphilis should have a dark-field examination before receiving antibiotics and monthly serologic tests for three months. For detailed information, consult the package literature.

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Tablets Ilosone Chewable, N.F., 125 mg.*

---

*Base equivalent. [080967]

References: 1. Griffith, R. S., and Black, H. R.: Am. J. M. Sc., *247*:69, 1964. 2. Griffith, R. S., and Black, H. R.: Antibiotics & Chemother., *12*:398, 1962. 3. Hirsch, H. A., Pryles, C. V., and Finland, M.: Am. J. M. Sc., *239*:198, 1960.

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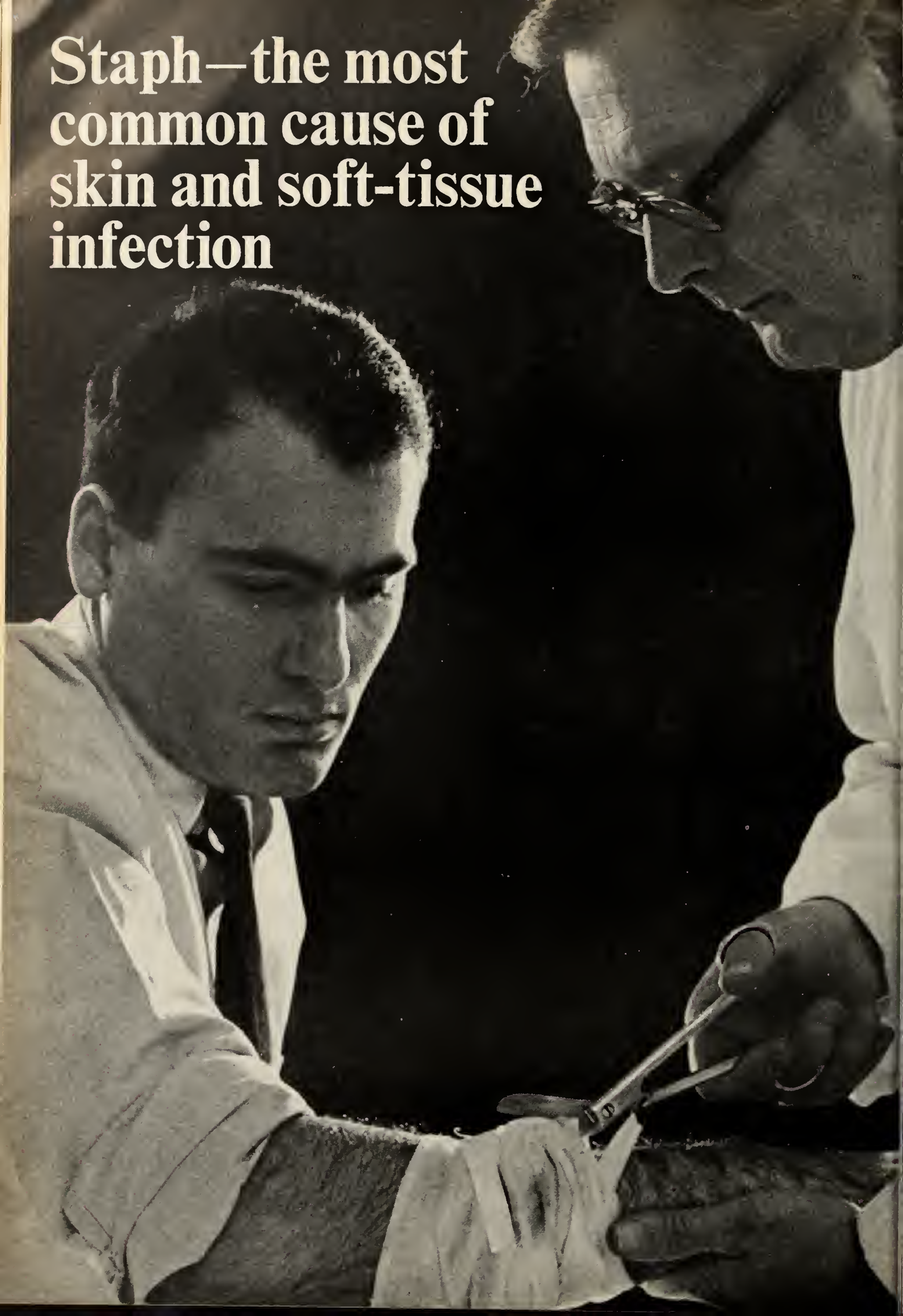
DOSAGE: *To relieve morning stiffness and pain*—when salicylates have not been taken during the day, an adult dose of three tablets at bedtime is suggested.

For 24-hour control of pain: Adults up to 160 lbs.-one tablet after each meal and one at bedtime. Adults over 160 lbs.-one tablet after each meal and two at bedtime.

PRECAUTION: Other salicylates should not be taken concurrently. Do not exceed recommended doses.

PERSISTIN®
salicylsalicylic acid 7½ gr. (485 mg.)-aspirin 2½ gr. (160 mg.)

Sherman Laboratories
Detroit, Michigan 48211


Staph—the most common cause of skin and soft-tissue infection

.reliably controlled with specific therapy

A suitable dosage form for every staph situation

Staph—the most common cause of skin and soft-tissue infection—also is responsible for many more serious infections, such as pneumonia, osteomyelitis, and septicemia. Often, a seemingly minor skin infection is the source of metastatic spread to deeper structures. When findings on culture incriminate staph as the cause, Prostaphlin (sodium oxacillin) will provide specific effective therapy.

Bactericidal effectiveness. Hardly a staph organism can resist the bactericidal action of Prostaphlin (sodium oxacillin), as shown by a 34-month *in vitro* study. Of all staph isolates tested, 99.5% were sensitive to oxacillin.[1]

Clinically proven. There is a high correlation between these *in vitro* findings and clinical results. Of 610 patients treated with Prostaphlin (sodium oxacillin), 89.8% were reported cured or improved, including those with staph infections resistant to penicillin G.[2] And since resistance does not appear to develop *in vivo,* therapy with oxacillin can be extended when necessary.

Outstanding safety record. Besides being staph-specific and rapidly absorbed—Prostaphlin (sodium oxacillin) has established an outstanding record of safety during five years of widespread clinical use. Continuous high blood levels of oxacillin have not produced toxic effects on kidney function, assuring a significant margin of safety. However, as with all penicillins, the possibility of allergic response should be considered.

Capsules, Oral Solution and Injectable. Prostaphlin (sodium oxacillin) is available in three flexible dosage forms to suit the age of the patient and severity of infection—capsules, an oral solution for pediatric use, and multi-dose vials for injection, I.M. or I.V.

PRESCRIBING INFORMATION: For complete information, consult Official Package Circular. *Indications:* Infections caused by Staphylococci, particularly those due to penicillin G-resistant Staphylococci. *Contraindications:* A history of severe allergic reactions to penicillin. *Precautions:* Typical penicillin-allergic reactions may occur. Safety for use in pregnancy and premature infants is not established. Because of limited experience, use cautiously and evaluate organ system function frequently in neonates. Mycotic or bacterial superinfections may occur. Assess renal, hematopoietic and hepatic function intermittently during long-term therapy. *Adverse Reactions:* Skin rashes, pruritus, urticaria, eosinophilia, nausea, vomiting, diarrhea, fever and occasional anaphylaxis. Rare cases of reversible hepatocellular dysfunction have occurred. Moderate SGOT elevations have been noted. Thrombophlebitis has occurred occasionally during intravenous therapy and leukopenia was noted in two cases. *Usual Oral Dosage:* Adults: 500 mg. *q*.4 or *q*.6*h*. Children: 50 mg./Kg./day. *Usual Parenteral Dosage:* Adults: 250-500 mg. *q*.4 or *q*.6*h*. Children: 50 mg./Kg./day. Treat beta-hemolytic streptococcal infections for at least 10 days. Give oral drug 1 to 2 hours before meals. *Supplied:* Capsules—250 and 500 mg. in bottles of 48. Injectable—250 mg., 500 mg., and 1 Gm. dry filled vial for I.M./I.V. use. For Oral Solution—100 ml. bottle, 250 mg./5 ml. when reconstituted. **A.H.F.S. CATEGORY 8:12.16**

References: 1. Abstracted from *Antibiotic Sensitivity of Staphylococci Studied from November 1962 through August 1965*, reported by Griffith, L.J., Staphylococcus Reference Laboratory, V. A. Hospital, Batavia, N.Y. 2. Data on file, Bristol Laboratories.

BRISTOL

BRISTOL LABORATORIES/Division of Bristol-Myers Co., Syracuse, N.Y.

Whenever you suspect staph PROSTAPHLIN®

SODIUM OXACILLIN

New DISPETTE™
Single dose disposable units

- No measuring—no droppers—no bottles
- Full dosage without waste or spillage
- Space-saving refrigerator package
- Practical and economical

Poliovirus Vaccine
Live, Oral, Trivalent

ORIMUNE®

1 DOSE POLIOVIRUS VACCINE LIVE ORAL TRIVALENT ORIMUNE®

CONTRAINDICATIONS and PRECAUTIONS: Do not inject this vaccine. Postpone vaccination in those with acute illness; in any condition having an adverse effect on the immune response mechanism (leukemias, lymphogenous diseases, dysgammaglobulinemias, during treatment with immune serum globulins or with cancer chemotherapy agents, etc.); in advanced debilitated states; or if there is persistent vomiting or diarrhea, or clinical signs of virus (including enterovirus) infection. Live measles and oral poliovirus vaccines should probably be given separately.

SIDE EFFECTS of significance have not been reported. However, the risk of vaccine-induced poliomyelitis, estimated to be from 1:2,500,000 to 1:50,000,000 should be considered.

Supplied in trays of 10. Order through your Lederle Representative or regular source of supply.

Lederle

447-7—4964

HIGHLAND HOSPITAL

ASHEVILLE, NORTH CAROLINA

Founded 1904

A DIVISION OF THE DEPARTMENT OF PSYCHIATRY OF DUKE UNIVERSITY

Accredited by the Joint Commission on Accreditation and Certified for Medicare

Complete facilities for evaluation of and intensive treatment of psychiatric patients, including individual psychotherapy, group therapy, psychodrama, electro-convulsive therapy, Indoklon convulsive therapy, drugs, social service work with families, family therapy, and an extensive and well organized activities program, including occupational therapy, art therapy, athletic activities and games, recreational activities and outings. The treatment program of each patient is carefully supervised in order that the therapeutic needs of each patient may be realized.

Complete modern facilities with 85 acres of landscaped and wooded grounds in the City of Asheville.

Brochures and information on financial arrangements available

Contact: Mrs. Elizabeth Harkins, ACSW, Coordinator of Admissions
or
Charles W. Neville, Jr., M.D.
Assistant Professor of Psychiatry and Medical Director
Area Code 704 253-2761

DORSEY "FLU-GRAM"

DON'T BE LULLED BY RELATIVE LACK OF FLU LAST WINTER. THIS WINTER BE PREPARED: WHEN THE COMPLAINTS ARE COUGH AND CONGESTION, YOU CAN RELIEVE THESE SYMPTOMS WITH TUSSAGESIC TABLETS. ONE TIMED-RELEASE TABLET AT MORNING, MIDAFTERNOON AND BEDTIME BRINGS UP TO 24 HOURS' RELIEF FROM TROUBLESOME COUGH AND STUFFED AND RUNNY NOSE. TUSSAGESIC IS THE FAMOUS TRIAMINIC FORMULA, PLUS THREE OTHER PROVED CONSTITUENTS. MAKES PATIENTS MORE COMFORTABLE. FAST. ASK YOUR DORSEY REPRESENTATIVE FOR SUPPLY OF STARTER SAMPLES, OR IF FLU IS ALREADY EPIDEMIC, PHONE COLLECT. SEE BELOW.

each
Tussagesic®
timed-release tablet contains:

Triaminic® (phenylpropanolamine hydrochloride 25 mg., pheniramine maleate 12.5 mg., pyrilamine maleate 12.5 mg.)	50 mg.
Dextromethorphan hydrobromide	30 mg.
Terpin hydrate	180 mg.
Acetaminophen	325 mg.

Dosage: Adults—1 tablet, swallowed whole to preserve timed-release feature, in morning, midafternoon and at bedtime. Side effects: Occasional drowsiness, blurred vision, cardiac palpitations, flushing, dizziness, nervousness or gastrointestinal upsets. Precautions: The patient should be advised not to drive a car or operate dangerous machinery if drowsiness occurs. Use with caution in patients with hypertension, heart disease, diabetes or thyrotoxicosis.

DORSEY LABORATORIES
a division of The Wander Company
Lincoln, Nebraska 68501

clip and file under "flu"

For relief of "flu-like" symptoms
Tussagesic timed-release tablets

PHONE COLLECT

For emergency starter samples
to Keith Sehnert, M.D.
Medical Director
(402) 434-6311

Fast delivery by your Dorsey
Representative

Maybe you don't want
your patients to halve Hygroton® chlorthalidone.

Maybe your patients complain:
"Why don't they make a tablet I don't have to halve?"

Please see brief prescribing summary at the end of advertisement.

Maybe you abandoned Hygroton chlorthalidone
because there wasn't a convenient half strength.

cations: Hypertension and many types of
a involving retention of salt and water.

traindications: Hypersensitivity and most
s of severe renal or hepatic disease.

ning: With the administration of enteric-
ed potassium supplements, which should
sed only when adequate dietary supple-
tation is not practical, the possibility of
ll bowel lesions (obstruction, hemor-
e, and perforation) should be kept in
. Surgery for these lesions has fre-
ntly been required and deaths have oc-
ed. Discontinue enteric-coated potas-
supplements immediately if abdominal
, distention, nausea, vomiting, or gastro-
tinal bleeding occur.

with caution in pregnant patients, since
rug may cross the placental barrier and
rse reactions which may occur in the
t (thrombocytopenia, hyperbilirubinemia,
ed carbohydrate metabolism, etc.) are
ntial problems in the newborn.

autions: Antihypertensive therapy with
oton should always be initiated cau-
ly in postsympathectomy patients and
tients receiving ganglionic blocking
ts or other potent antihypertensive drugs,
rare. Reduce dosage of concomitant
ypertensive agents by at least one-half.
iturates, narcotics or alcohol may po-
ate hypotension. Because of the possi-
of progression of renal damage, peri-
determination of the BUN is indicated.
ontinue if the BUN rises or liver dysfunc-
is aggravated. Hepatic coma may be
ipitated.

trolyte imbalance, sodium and/or potas-
depletion may occur. If potassium deple-
should occur during therapy, Hygroton
ld be discontinued and potassium sup-
ents given, provided the patient does
ave marked oliguria.

special care in cirrhosis or severe
emic heart disease and in patients re-
ing corticosteroids, ACTH, or digitalis.
restriction is not recommended.

rse Reactions: Nausea, gastric irritation,
ting, anorexia, constipation and cramp-
dizziness, weakness, restlessness, hy-
lycemia, hyperuricemia, headache, mus-
ramps, orthostatic hypotension, aplastic
ia, leukopenia, thrombocytopenia,
nulocytosis, impotence, dysuria, transient
pia, skin rashes, urticaria, purpura, nec-
ing angiitis, acute gout, and pancreatitis
n epigastric pain or unexplained G.I.
ptoms develop after prolonged adminis-
on. Other reactions reported with this
s of compounds include: jaundice, xan-
sia, paresthesia, and photosensitization.

age Dosage: One tablet with breakfast
or every other day.

lability: White, single-scored tablets of
g. and aqua tablets of 50 mg., in bot-
of 100 and 1000. (B)46-230-D

full details, please see the complete
cribing Information.

y Pharmaceuticals
sion of
y Chemical Corporation
ley, New York

Here's the Hygroton
they don't
have to halve

New Hygroton 50 mg.
from Geigy

to go with
the Hygroton 100 mg.
you know

HY-5406

When the agitated geriatric disrupts the home...

His teen-age granddaughter won't invite friends home because of his outbursts.

for moderate to severe anxiety
Mellaril®
(thioridazine)
25 mg. t.i.d.
SANDOZ

His slovenly room and habits create more tension.

His disturbances at the table make every meal a nightmare.

His daughter can't please him. There is "just no living with him."

See following page for prescribing information.

When the agitated geriatric disrupts the home...

Anxiety that *seriously interferes* with the individual's performance at work, at home, or in the community may be regarded as *moderate* to severe in degree.

Mellaril often recommends itself to the treatment of moderate to severe anxiety because it

- helps control the most frequent symptoms: marked tension, agitation, apprehension, restlessness, hypermotility
- often alleviates anxiety-induced somatic complaints
- frequently helps strengthen emotional resources
- helps the patient maintain realistic contact with environment, closer harmony with family

Thus, when you consider the anxiety moderate to severe... consider Mellaril.

Contraindications: Severely depressed or comatose states from any cause, and in association with or following MAO inhibitors; severe hypertensive or hypotensive heart disease.

Precautions: Hypersensitivity reactions (e.g., leukopenia, agranulocytosis) and convulsive seizures are infrequent. Pigmentary retinopathy has been observed where doses in excess of those recommended were used for long periods of time. May potentiate central nervous system depressants, atropine, and phosphorus insecticides. Where complete mental alertness is required, administer the drug cautiously and increase dosage gradually. In addition, orthostatic hypotension (especially in female patients) has been observed. Epinephrine should be avoided in treatment of drug-induced hypotension.

Side Effects: Pseudoparkinsonism and other extrapyramidal disorders are infrequent; drowsiness, especially in high doses early in treatment, may occur; nocturnal confusion, dryness of the mouth, nasal stuffiness, headache, peripheral edema, lactation, galactorrhea, and inhibition of ejaculation are noted on occasion; photosensitivity and other allergic skin reactions may occur but are extremely rare.

Before prescribing, see package insert for full product information.

for moderate to severe anxiety

Mellaril®
(thioridazine)
25 mg. t.i.d.

SANDOZ

---

mudrane®

for

- EMPHYSEMA
- ASTHMA
- CHRONIC BRONCHITIS
- BRONCHIECTASIS

The fast-disintegrating uncoated tablet gives relief in 15 minutes

Each tablet contains:

Potassium Iodide	195 mg.
Aminophylline	130 mg.
Phenobarbital, Caution: May be habit forming	21 mg.
Ephedrine HCl	16 mg.

FEDERAL LAW PROHIBITS
DISPENSING WITHOUT PRESCRIPTION

Precautions: Usual for aminophylline-ephedrine-phenobarbital. Iodides may cause nausea, long use may cause goiter. Discontinue if symptoms of iodism develop.

Iodide contraindications: tuberculosis, pregnancy.

DOSAGE

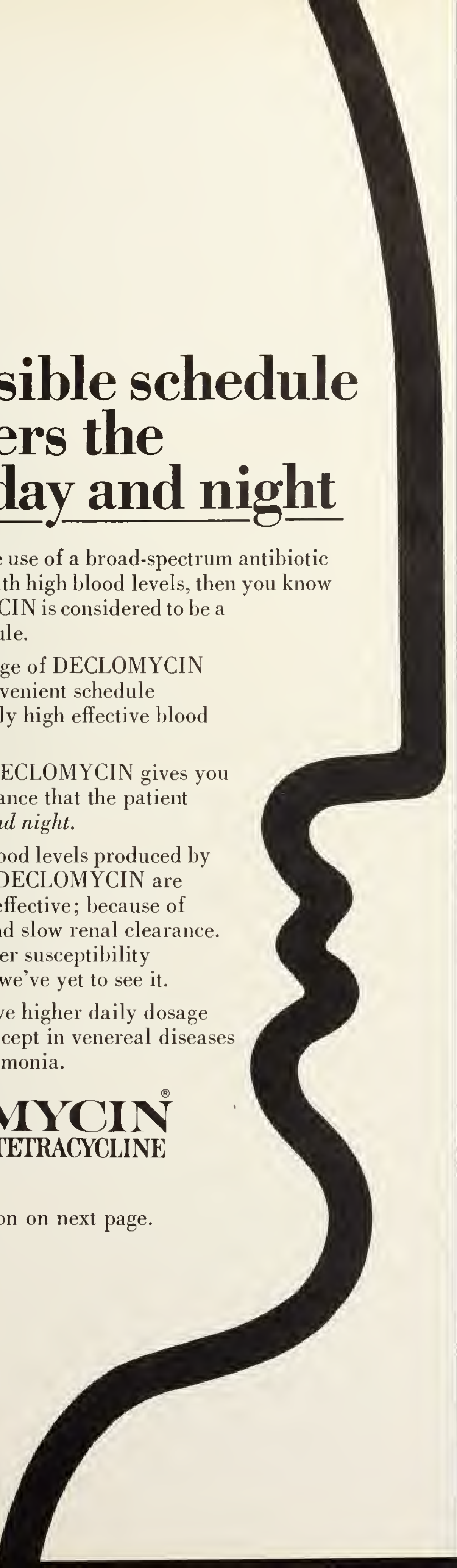
One tablet, with full glass of water, 3 or 4 times daily.

Dispensed in bottles of 100 and 1000 tablets.

MUDRANE GG—Formula, dosage and package identical to Mudrane—*except*—100 mg. glyceryl guaiacolate replaces the potassium iodide. The value of Mudrane cannot be enjoyed by a small group in which K.I. is contraindicated. Mudrane GG is prepared for this group.

MUDRANE GG ELIXIR—Four 5 cc teaspoonfuls is equivalent to one Mudrane GG tablet. Dosage adjusted to age and weight of child. Mudrane GG Elixir is for pediatric patients and those who think they cannot swallow tablets. Dispensed in pint and half gallon bottles.

WM. P. POYTHRESS & CO., INC.
RICHMOND, VIRGINIA 23217
Manufacturers of ethical pharmaceuticals since 1856



b.i.d.

The sensible schedule that covers the patient day and night

If your objective in the use of a broad-spectrum antibiotic is prolonged action, with high blood levels, then you know why b.i.d. DECLOMYCIN is considered to be a sensible dosage schedule.

The maintenance dosage of DECLOMYCIN can be kept at this convenient schedule because of its unusually high effective blood and tissue levels.

The b.i.d. dosage of DECLOMYCIN gives you the comfortable assurance that the patient is well-covered, *day and night.*

In clinical practice, blood levels produced by a therapeutic dose of DECLOMYCIN are high, prolonged, and effective; because of high serum binding and slow renal clearance. And if there's a broader susceptibility pattern of organisms, we've yet to see it.

There is no need to give higher daily dosage than 300 mg b.i.d., except in venereal diseases and Eaton Agent pneumonia.

DECLOMYCIN®
DEMETHYLCHLORTETRACYCLINE

Lederle

Prescribing information on next page.

b.i.d. The sensible schedule that covers the patient day and night

DECLOMYCIN Demethylchlortetracycline should be equally or more effective therapeutically than other tetracyclines when the offending organisms are tetracycline-sensitive.

Contraindication: History of hypersensitivity to demethylchlortetracycline.

Warning—In renal impairment, usual doses may lead to excessive accumulation and liver toxicity. Under such conditions, lower than usual doses are indicated, and, if therapy is prolonged, serum level determinations may be advisable. A photodynamic reaction to natural or artificial sunlight has been observed. Small amounts of drug and short exposure may produce an exaggerated sunburn reaction which may range from erythema to severe skin manifestations. In a smaller proportion, photoallergic reactions have been reported. Patients should avoid direct exposure to sunlight and discontinue drug at the first evidence of skin discomfort. Necessary subsequent courses of treatment with tetracyclines should be carefully observed.

Precautions—Overgrowth of nonsusceptible organisms may occure. Constant observation is essential. If new infections appear, appropriate measures should be taken. In infants, increased intracranial pressure with bulging fontanels has been observed. All signs and symptoms have disappeared rapidly upon cessation of treatment.

Side Effects—Gastrointestinal system—anorexia, nausea, vomiting, diarrhea, stomatitis, glossitis, enterocolitis, pruritus ani. Skin—maculopapular and erythematous rashes. A rare case of exfoliative dermatitis has been reported. Photosensitivity; onycholysis and discoloration of the nails (rare). Kidney—rise in BUN apparently dose related. Transient increase in urinar output, sometimes accompanied by thirst (rare). Hypersensitivity reactions—urticaria, angioneurotic edema, anaphylaxis. Teeth—dental staining (yellow-brown) in children of mothers given this drug during the latter half of pregnancy, and in children given the drug during the neonatal period, infancy and early childhood. Enamel hypoplasia has been seen in a few children. If adverse reaction or idiosyncrasy occurs discontinue medication and institute appropriate therapy.

Average Adult Daily Dosage: 150 mg q.i.d. or 300 mg b.i.d. Should be given 1 hour before or 2 hours after meals, since absorption is impaired by the concomitant administration of high calcium content drugs, foods and some dairy products. Treatment of streptococcal infections should continue for 10 days, even though symptoms have subsided.

In the treatment of syphilis a dosage schedule of a total of 12 to 18 Gm. given in equally divided doses over a period of 10 to 15 days should be followed. Close follow-up observation of the patient is recommended, including appropriate laboratory tests, since demethylchlortetracycline has not had adequate evaluation in all stages of syphilis. Spinal fluid examination should be included as part of this follow-up.

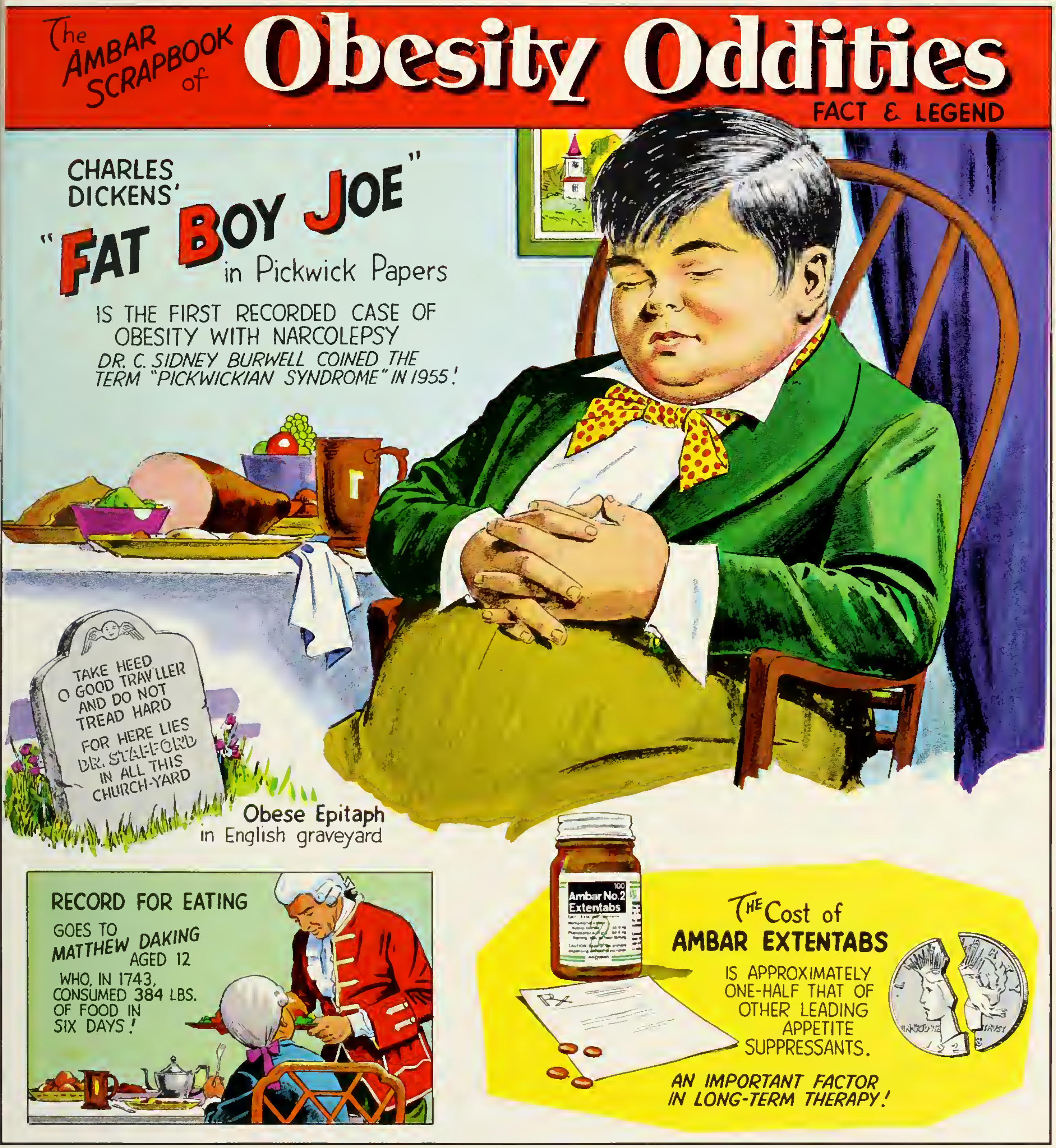
Acute gonococcal anterior urethritis in males has been treated effectively with a single dose of 600-900 mg. of DECLOMYCIN Demethylchlortetracycline. Individuals unable to tolerate large single doses due to gastrointestinal side effects may be treated with 150 mg. every 6 hours for a minimum of 4 doses or 300 mg. every 12 hours for a minimum of 2 doses. Females should be treated with a dosage of 150 mg. every 6 hours or 300 mg. every 12 hours until a cure is effected.

Primary Atypical Pneumonia (Eaton Agent): The average adult daily dosage is 900 mg. in 3 divided doses for six days.

LEDERLE LABORATORIES, A Division of
American Cyanamid Company, Pearl River, N.Y.

Lederle

485-7—S9938


The AMBAR SCRAPBOOK of
Obesity Oddities
FACT & LEGEND
CHARLES DICKENS' "FAT BOY JOE" in Pickwick Papers
IS THE FIRST RECORDED CASE OF OBESITY WITH NARCOLEPSY
DR. C. SIDNEY BURWELL COINED THE TERM "PICKWICKIAN SYNDROME" IN 1955!
TAKE HEED O GOOD TRAV'LLER AND DO NOT TREAD HARD FOR HERE LIES DR. STAFFORD IN ALL THIS CHURCH-YARD
Obese Epitaph in English graveyard
RECORD FOR EATING
GOES TO MATTHEW DAKING AGED 12
WHO, IN 1743, CONSUMED 384 LBS. OF FOOD IN SIX DAYS!
100
Ambar No.2 Extentabs
Rx
THE Cost of AMBAR EXTENTABS
IS APPROXIMATELY ONE-HALF THAT OF OTHER LEADING APPETITE SUPPRESSANTS.
AN IMPORTANT FACTOR IN LONG-TERM THERAPY!

CONTROL FOOD AND MOOD ALL DAY LONG WITH A SINGLE MORNING DOSE

AMBAR #2 EXTENTABS®

methamphetamine HCl 15 mg., phenobarbital 64.8 mg. (1 gr.) (Warning: may be habit forming).

One Ambar Extentab before breakfast can help control most patients' appetite for up to 12 hours. Methamphetamine, the appetite suppressant, gently elevates mood and helps overcome dieting frustrations. Phenobarbital, the sedative in Ambar, controls irritability and anxiety... helps maintain a state of mental calm and equanimity. Both work together to ease the tensions that erode the willpower during periods of dieting.

Also available: Ambar #1 Extentabs®—methamphetamine hydrochloride 10 mg., phenobarbital 64.8 mg. (1 gr.) (Warning: may be habit forming).

BRIEF SUMMARY/**Indications:** Ambar suppresses appetite and helps offset emotional reactions to dieting. **Contraindications:** Hypersensitivity to barbiturates or sympathomimetics; patients with advanced renal or hepatic disease. **Precautions:** Administer with caution in the presence of cardiovascular disease or hypertension. **Side Effects:** Nervousness or excitement occasionally noted, but usually infrequent at recommended dosages. Slight drowsiness has been reported rarely. See package insert for further details.

A. H. ROBINS COMPANY,
RICHMOND, VA. 23220

A·H·ROBINS

"Breathing's a snap again," he said gingerly.
(COMPLIMENTS OF DIMETAPP)

Help clear up that miserable stuffed-up feeling with Dimetapp. Each hard-working Extentab brings welcome relief from the stuffiness, drip and congestion of upper respiratory conditions for up to 10-12 hours. Yet, patients seldom experience drowsiness or overstimulation. The key to success is the Dimetapp formula: Dimetane (brompheniramine maleate)—along with phenylephrine and phenylpropanolamine, two time-tested decongestants. They get the job done... in a hurry.

Indications: Dimetapp is indicated for symptomatic relief of the allergic manifestations of respiratory illnesses, such as the common cold and bronchial asthma, seasonal allergies, sinusitis, rhinitis, conjunctivitis, and otitis. *Contraindications:* Hypersensitivity to antihistamines. Not recommended for use during pregnancy. *Precautions:* Until patient's response has been determined, he should be cautioned against engaging in operations requiring alertness. Administer with care to patients with cardiac or peripheral vascular diseases or hypertension. *Side Effects:* Hypersensitivity reactions including skin rashes, urticaria, hypotension and thrombocytopenia, have been reported on rare occasions. Drowsiness, lassitude, nausea, giddiness, dryness of the mouth, mydriasis, increased irritability or excitement may be encountered.
Dosage: 1 Extentab morning and evening.
Supplied: Bottles of 100 and 500.

A.H. ROBINS COMPANY
RICHMOND, VA. 23220
A-H-ROBINS

in sinusitis, colds, U.R.I.

Dimetapp® Extentabs®

(Dimetane® [brompheniramine maleate], 12 mg.;
phenylephrine HCl, 15 mg.; phenylpropanolamine HCl, 15 mg.)

up to 10-12 hours clear
breathing on one tablet

bronchodilation in asthma...without "jitters"

Most anti-asthmatic products contain ephedrine-like drugs. ELIXOPHYLLIN® never did. So, ELIXOPHYLLIN will not cause nervousness, palpitations, insomnia, or other undesirable side effects of ephedrine-like products.

Other advantages of ELIXOPHYLLIN: rapid and sustained bronchodilation • convenient, adjustable dosage • hypoallergenic • adrenergic abuse eliminated.

ELIXOPHYLLIN is theophylline in free and soluble form—resulting in rapid and dependable absorption with less risk of gastric irritation.

Adult maintenance dosage in bronchial asthma: one ounce (30 ml.) t.i.d. on arising, at 3 P.M., and on retiring. Adjust dosage to patient response. This average dosage provides continuous bronchodilation. Do not administer other xanthine preparations concurrently. May be contraindicated in peptic ulcer.

ELIXOPHYLLIN®

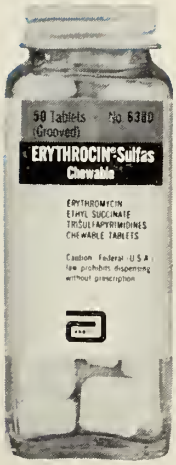
Each 15 ml. contains theophylline (anhydrous) 80 mg.; alcohol 20%

Sherman Laboratories

Detroit, Michigan 48211

Perhaps there have been times when you wanted to prescribe erythromycin and triple sulfas for little patients. Now you can—with a choice of two new fine-tasting pediatric forms.

New–Two Pediatric Forms of Erythromycin and Triple Sulfas


50 Tablets No. 6380
(Grooved)
ERYTHROCIN® Sulfas
Chewable
ERYTHROMYCIN ETHYL SUCCINATE TRISULFAPYRIMIDINES CHEWABLE TABLETS
Caution Federal (U.S.A.) law prohibits dispensing without prescription

No. 6372
For Oral Suspension
ERYTHROCIN® Sulfas
Granules
ERYTHROMYCIN ETHYL SUCCINATE TRISULFAPYRIMIDINES FOR ORAL SUSPENSION

ERYTHROCIN®-SULFAS Chewable

(Erythromycin ethyl succinate-trisulfapyrimidines chewable tablet)

In clinical trials[1,2], this orange-flavored tablet was given to 55 patients, aged four months to 18 years.

Diagnoses (multiple in some cases) represented a cross section of bacterial infections commonly seen in pediatric office practice.

Therapy was given from three to 12 days, with an average of six days.

Of the 55 patients, 30 were reported cured within 72 hours, while 22 showed partial recovery within the same time, and subsequent clinical cure.

A clinical cure rate of 94.5%

ERYTHROCIN®-SULFAS Granules

(Erythromycin ethyl succinate-trisulfapyrimidines granules for oral suspension)

87 patients were treated[1,2]—all children, ages four months to 15 years.

The diagnoses were multiple in some cases and were chiefly bacterial infections of the respiratory tract.

Dosage was maintained from three to 10 days; average treatment was five days. All of the ill children accepted the orange-flavored suspension favorably.

53 were clinically cured within 72 hours, while 32 showed partial relief within the same time, and subsequent clinical cure.

701358

A clinical cure rate of 97.7%

ABBOTT

Brief Summary on next page

1. Case Reports on File, Dept. Clin. Development, Abbott Laboratories.
2. Polley, R.F.L., Use of Erythromycin-Sulfas in Office Practice, Western Med., 7:177, July, 1966.

ERYTHROCIN®-SULFAS
Brief Summary

Contraindications: Known sensitivity to erythromycin or sulfonamides. Because of the possibility of kernicterus with sulfonamides, do not use in pregnancy at term, premature or newborn infants.

Warnings: As with other forms of sulfonamide therapy, carefully evaluate patients with liver or kidney damage, urinary obstruction, or blood dyscrasia. Deaths have been reported from hypersensitivity reactions and blood dyscrasias following use of sulfonamides. Perform blood counts and liver and kidney function tests if used repeatedly at close intervals or for long periods.

Precautions, Side Effects: Occasionally mild abdominal discomfort, nausea or vomiting may occur with erythromycin, generally controlled by reduction of dosage. Mild allergic reactions (such as urticaria and other skin rashes) may occur. Serious allergic reactions have been extremely infrequent. Use sulfonamides with caution in patients with a history of allergy. Assure adequate fluid intake to prevent crystalluria and institute alkali therapy if indicated. If overgrowth of nonsusceptible organisms occurs, withdraw the drug and institute appropriate treatment. If a patient should show signs of hypersensitivity, appropriate countermeasures (e.g. epinephrine, steriods, etc.) should be administered and the drug withdrawn.

Adverse Reactions: Sulfonamide therapy may be associated with headache, nausea, vomiting, urticaria, diarrhea, hepatitis, pancreatitis, blood dyscrasias, neuropathy, drug fever, skin rash, injection of the conjunctiva and sclera, petechiae, purpura, hematuria and crystalluria.

Side effects due to erythromycin are infrequent, but occasional abdominal discomfort, nausea, or vomiting, urticaria and other skin rashes may occur.

Supplied: The Granules for Oral Suspension come in bottles of 60 ml. and 150 ml. The Chewable tablets are in bottles of 50. Each 5-ml. teaspoonful of reconstituted Granules or each Chewable tablet provides erythromycin ethyl succinate equivalent to 125 mg. of erythromycin activity and 167 mg. of each of sulfadiazine, sulfamerazine and sulfamethazine.

701358 ABBOTT

W P P

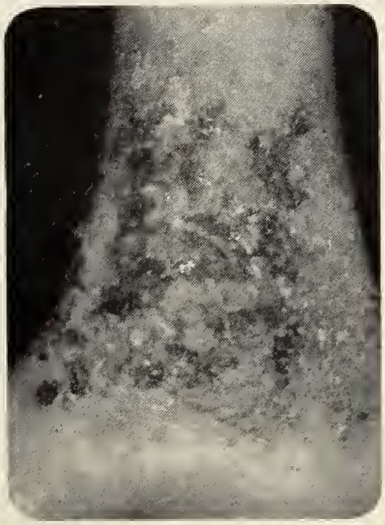
The relief received from the first Trocinate 400 mg. tablet is so prompt that the discomfort of diarrhea ceases to be a bother. May be repeated every four hours.

Upon request, a supply of Trocinate 400 mg. with literature will be sent to physicians for their personal use.

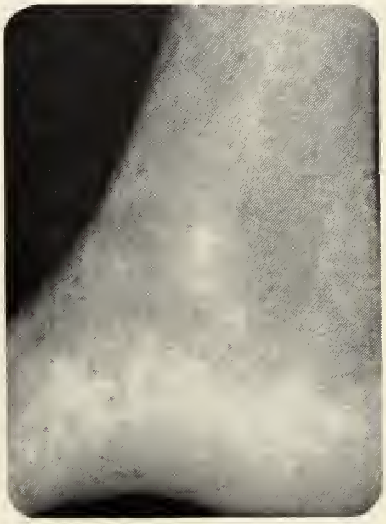
WM. P. POYTHRESS & CO., INC.
RICHMOND, VIRGINIA 23217
Manufacturers of ethical pharmaceuticals since 1856

Diarrhea
TROCINATE® 400 MG.
BRAND THIPHENAMIL HCl.

Eczema of many years... controlled in two weeks



Before treatment



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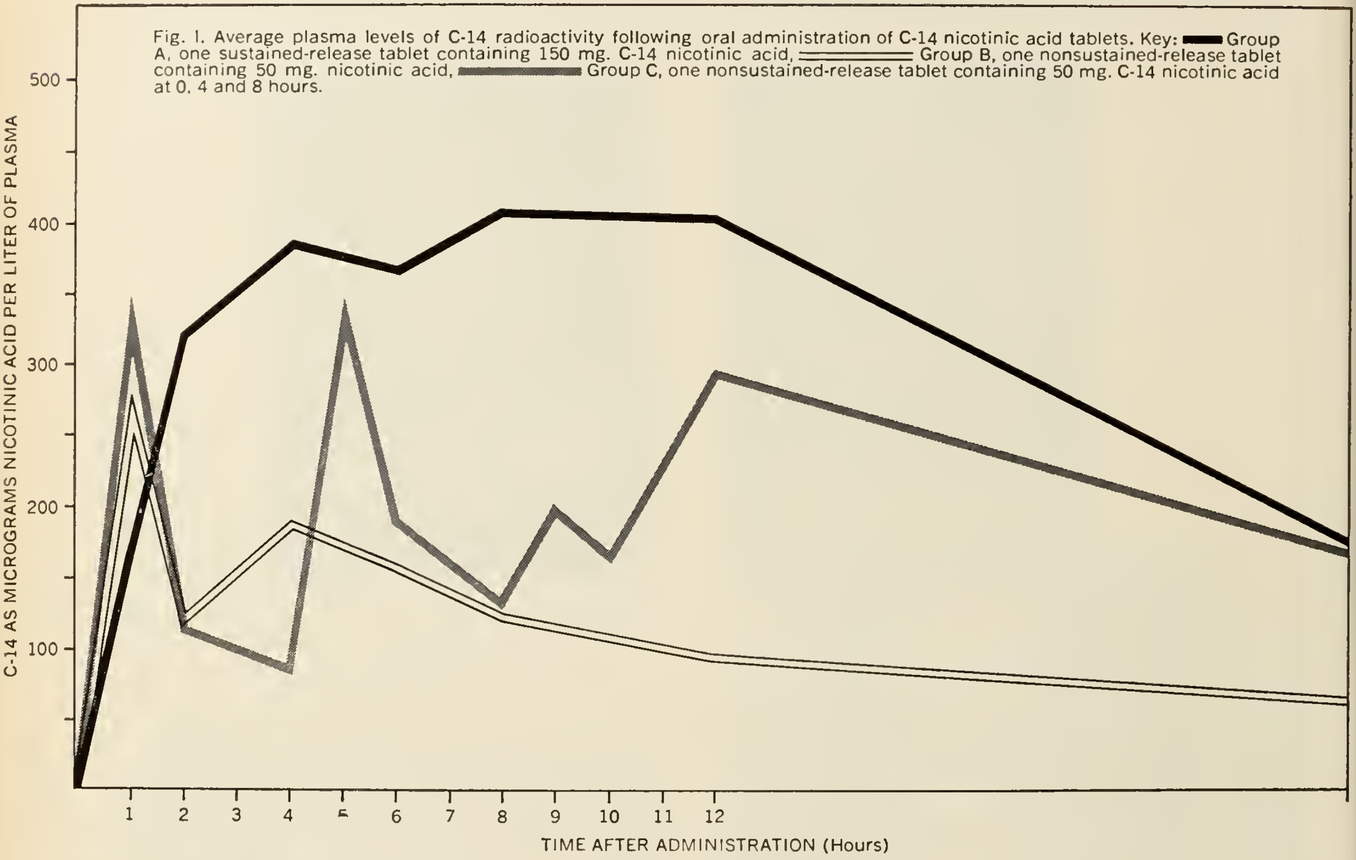

Fig. I. Average plasma levels of C-14 radioactivity following oral administration of C-14 nicotinic acid tablets. Key: ▬ Group A, one sustained-release tablet containing 150 mg. C-14 nicotinic acid, ═ Group B, one nonsustained-release tablet containing 50 mg. nicotinic acid, ▬ Group C, one nonsustained-release tablet containing 50 mg. C-14 nicotinic acid at 0, 4 and 8 hours.

(fewer absent doses by absent-minded patients)

Human volunteer subjects were administered Geroniazol TT tablets with the nicotinic acid component made radioactive with C-14. Plasma and urine samples were analyzed. (See Figures I and II) The radioactive tracer study substantiated the previous clinical evidence that the release of nicotinic acid from the Geroniazol TT tablet produced a gradual rise in plasma levels to a plateau for a total of 12 hours and more.

Such proven sustained activity makes the management of geriatric patients much easier by minimizing the possibility of neglected doses through absent-mindedness or senile confusion. Therapy *can* be continuous on a daily dose of only one Geroniazol TT tablet every 12 hours.

The gradual release of nicotinic acid in Geroniazol TT will provide the well-known peripheral vasodilatation needed in patients with deficient circulation and with a minimum amount (if any) of "flushing." Also, cerebrovascular circulation is complemented by pentylenetetrazol, long-established as a cerebral and respiratory stimulant.

Geroniazol TT improves the typical, unfortunate, signs of senile confusion. Patients become more alert,

ged and debilitated

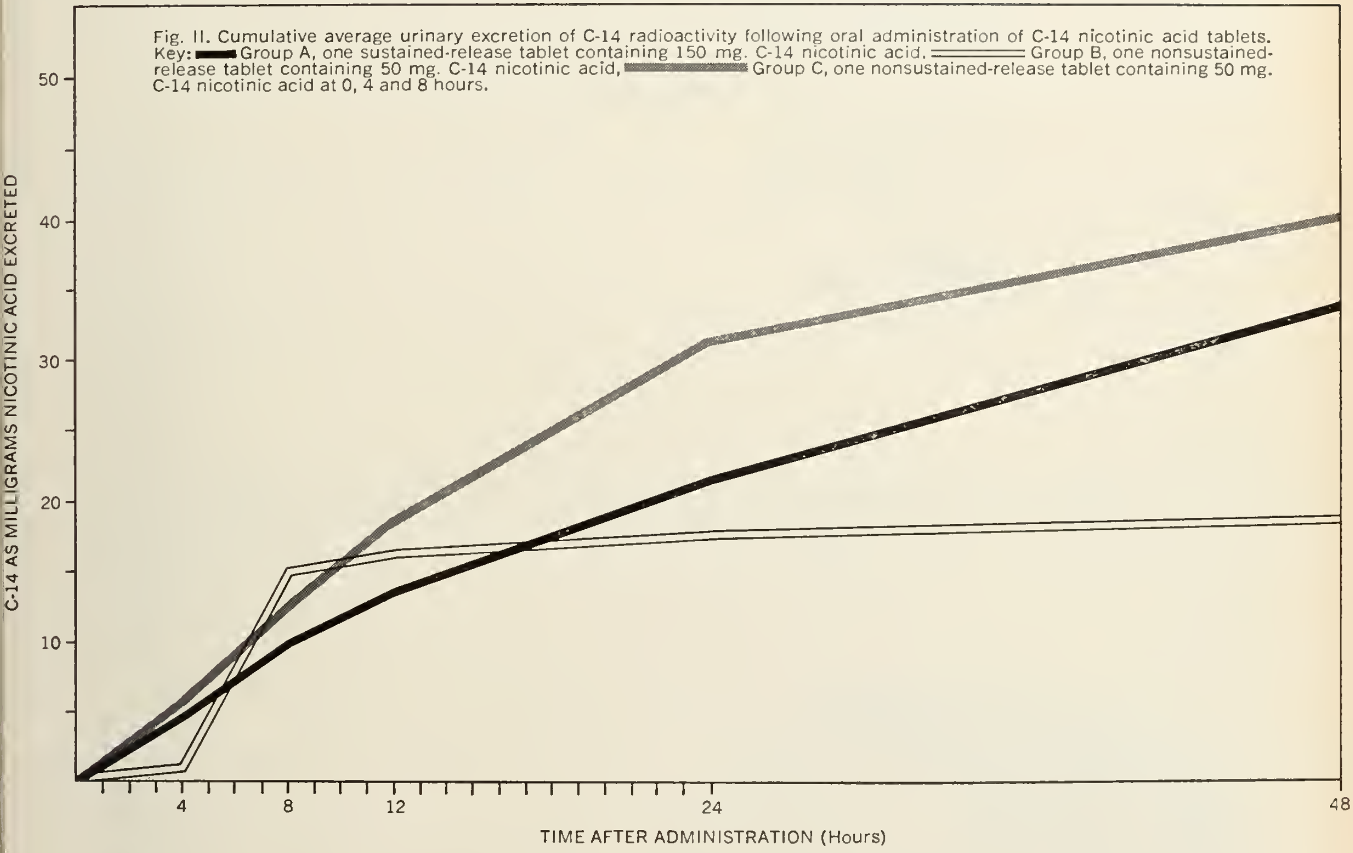

Fig. II. Cumulative average urinary excretion of C-14 radioactivity following oral administration of C-14 nicotinic acid tablets. Key: ▬ Group A, one sustained-release tablet containing 150 mg. C-14 nicotinic acid. ═ Group B, one nonsustained-release tablet containing 50 mg. C-14 nicotinic acid, ▒ Group C, one nonsustained-release tablet containing 50 mg. C-14 nicotinic acid at 0, 4 and 8 hours.

less confused and moody. Personal care, memory, emotional stability, social attention improve. Fatigue, apathy and irritability are reduced.

A prescription for 100 tablets of Geroniazol TT will permit your patients to enjoy the benefits of time-prolonged nicotinic acid/pentylenetetrazol therapy, at an economical price. Dosage is only one tablet every 12 hours.

Contraindications: There are no known contraindications.

Precautions: Exercise caution when treating patients with a low convulsive threshold.

Side Effects: Side effects are rarely encountered, however due to the vasodilatation effect of nicotinic acid, transitory mild nausea, flushing, tingling and pruritus are possible.

Dosage: One tablet every 12 hours.

Supplied: Prescribe bottles of 100 tablets, to take advantage of recent price reduction.

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CARDIAC PACEMAKERS IN THE MANAGEMENT OF HEART BLOCK

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The use of cardiac pacemakers for heart block is well established, as illustrated by the fact that there have been implanted, in this country alone, approximately 25,000 units of varying design. As might be anticipated, the use of these devices, however effective, is associated with some hazard, and sufficient time has elapsed to gain experience with the various problems associated with pacemaker implantation.

The purpose of this discussion is to present an analysis of the cumulative experience in the use of cardiac pacemakers at the Medical College and Roper Hospitals of Charleston, South Carolina. There has been no effort at patient selection and all patients in whom cardiac pacemakers were inserted between September, 1961 and March, 1967 are included.

Description of Patient Series

There were 35 patients, 16 females and 19 males, ranging from 5 to 87 years in age. The majority of the patients were in the sixth and seventh decades of life.

The etiology of the heart block (Table I) is typical of most reported series.

I

ETIOLOGY OF HEART BLOCK
(35 Patients)

Coronary Artery Disease	23
HCVD (Cardiomegaly and Hypertension)	2
Congenital	2
Myocarditis	
Viral	1
Rheumatoid	1
Traumatic (Surgical)	5
Unknown	1
	35

The indications for pacemaker insertion are listed in Table II. Stokes-Adams syndrome was, by far, the most common indication, occurring in 74% of the patients. All of the patients except the group with post-surgical block had been subjected to some form of medical therapy, either the sympathomimetic amines or

II

INDICATION FOR PACEMAKER INSERTION
(35 Patients*)

Stokes-Adams Disease	74%
Congestive Heart Failure	21%
Primary Bradycardia (Surgical)	14%
Low Output Syndrome	14%
Angina	0

*Some patients fall into more than one category.

Medical College of South Carolina, Division of Thoracic Surgery, Division of Cardiology

*Supported in part by PHS Grant No. HE 5337-08

**Supported in part by John and Mary R. Markle Foundation isoproterenol (Isuprel) prior to pacemaker insertion.

The impaired A-V conduction consisted of permanent A-V block in 27 patients and partial block with recurrent episodes of complete block in eight.

The type of pacemaker, asynchronous or synchronous, the site of pulse generator insertion, and the manufacturer of the various pacemakers utilized are listed in Table III. By far the most common type of pacemaker used was the asynchronous, epicardial (Medtronic) with the battery or pulse generator inserted subcutaneously in the left upper quadrant of the abdomen.

III

TYPE OF PACEMAKER AND SITE OF INSERTION

•50 PACEMAKERS			
ASYNCHRONOUS			(48)
Epicardial			
Abdominal			28
Pectoral			9
Pervenous			
Pectoral			11
SYNCHRONOUS			(2)
Epicardial			
Abdominal			2
MANUFACTURER			
Medtronic	42	Weinberg	1
Electrodyne	5	Cordis (Atricor)	2

The operative technique for implantation of the epicardial and transvenous pacemakers was essentially the same that has been described in numerous publications.[1, 2] Temporary pervenous pacemaker control was routinely employed for all patients undergoing general anesthesia. The epicardial pacemakers were inserted under general anesthesia via a thoracotomy through the anterior left fourth intercostal space with implantation of the electrodes directly into the ventricular myocardium. The permanent pervenous pacemaker endocardial lead was introduced under local anesthesia through a limited exposure in the right side of the neck into the external or internal jugular vein, and placed with fluoroscopic control in the right ventricular apex. The battery for this unit was implanted routinely in a pectoral subcutaneous pouch.

IV

RESULTS OF PACEMAKER IMPLANTATION
(35 Patients)

Operative Mortality	0
Hospital Deaths	1
5 y/o 4 days after surgery	
Late Survival (1-66 months)	29
Late Deaths	5
16 months—Lung Cancer	
22 months—Myocardial Infarction	
7 months—Post-operative Tetralogy	
(2 unknown)	

Results

The results are summarized in Table IV. Of the 35 patients, 29 are living and either symptom-free or significantly improved. There were no deaths attributed to the operation of pacemaker insertion, and only one patient succumbed in the hospital in the immediate postoperative period. This was a five year old child who developed complete A-V dissociation following repair of tetralogy of Fallot. Of the five late deaths, three are assumed to be unrelated to the heart block since the pacemaker was functioning at the time of death. The cause of death in the remaining two is unknown.

Problems Associated with the Pacemaker

There were 68 procedures including the initial pacemaker insertion performed in the 35 patient series. A total of 50 pacemakers were inserted and 18 other maneuvers were necessary in managing the associated problems.

Twenty-two patients required only the initial procedure, and 16 of these are living and well. Problems occurring in the remaining 13 patients required a total of 33 procedures. In 15 instances pacemaker replacement was necessary, and in 18 a lesser procedure was sufficient.

An analysis of pacemaker "problems" (Table V) reveals that the most prevalent cause of difficulty was the pacemaker electrode. This included not only a break

V

ANALYSIS OF COMPLICATIONS ASSOCIATED WITH PACEMAKER

PACEMAKER	
Electrode	12
Pulse Generator	7
PATIENT	
Tissue (Sepsis—Allergy)	8
Threshold Rise	3
Perforated Ventricle	1
Electrode Position Loss (Endocardial)	2

in the wire, but entry of tissue fluid into the silastic* sheath covering the electrode, resulting in corrosion and current loss. Pulse generator failure includes cases in which the power unit was no longer emitting adequate electrical current as well as those in which the battery had to be replaced for other reasons such as sepsis or skin erosion.

Patient problems (Table V) consisting primarily of local tissue reaction necessitated various procedures such as abscess drainage, excision of granulation tissue, and on occasion relocation of the electrodes for management; however, only those eight procedures performed with the patient hospitalized are included. The most common site for this difficulty was in the area of greatest electrode torque, and where overlying pressure from a constricting belt or a girdle was most persistent, such as the costal margin.

Three patients developed a rise in the myocardial threshold. In two patients, this was successfully managed by an increase in output amplitude of the pulse generator.

Ventricular perforation by an endocardial electrode occurred in one patient. Thoracotomy was performed without significant difficulty in this patient for evacuation of the hemopericardium, and insertion of a permanent epicardial electrode.

In two patients the endocardial electrode did not maintain position, resulting in intermittent pacing. This problem was successfully managed by careful repositioning of the electrode lead under local anesthesia.

The clinical manifestations of pacemaker problems are recorded in Table VI. In 16 patients, some of whom are obviously included twice, recurrent symptoms occasioned their being seen by the physician. In eight patients, pacemaker malfunction was inferred by the physician when on routine follow-up examination asymptomatic bradycardia was noted. No instance of "runaway" pacing or increase in cardiac rate on the basis of pulse generator failure was encountered.

VI

MANIFESTATION OF PACEMAKER PROBLEMS
(13 Patients—33 Procedures*)

Recurrent Symptoms	(16)	48%
Bradycardia—No Symptoms	(8)	24%
Tissue Reaction (Local)	(8)	24%
Muscle Twitch	(1)	4%

*Some patients are included more than once.

Conduction Return Following Pacemaker Insertion

Seven of 35 patients evidenced some degree of AV conduction which had not been present before the pacemaker was inserted, thus accentuating competitive pacing. In two patients, administration of quinidine was necessary to suppress the competing focus. In one patient, an increase of the pacemaker rate allowed the pacemaker to gain dominance. In the remaining four, the artificial pacemaker seemed to be the dominant pacing influence.

Discussion

Cardiac pacing by means of an artificially induced electrical current for patients with heart block has yielded satisfactory results. A comparison between this method of treatment[2, 3] and medical therapy clearly demonstrates the greater reliability and effectiveness of electrical pacing. Friedberg[4] and Curd[5] have both reported an extremely high mortality in patients with Stokes-Adams syncope managed on a medical regimen.

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*Product of Dow Corning

The efficacy of cardiac pacing is encouraging physicians to a more frequent use of this form of therapy. In addition, physicians are beginning to employ pacemakers for the asymptomatic patients with AV and SA block, especially if the ventricular rate is 45 per minute or less. In heart block, as is the case with many chronic conditions, the extent of the patient's disability is frequently not appreciated until the condition is corrected.

The surgery necessary for pacemaker insertion is generally performed without serious difficulties in spite of the fact that many of the patients, by virtue of their cardiac status as well as their advanced age, are in a precarious condition.

The relative merits of synchronous, asynchronous, and demand pacers cannot be inferred from our limited series. On the basis of experience reported by others[6] as well as our own, we are inclined to utilize the synchronous pacers in the good risk, younger age groups unless the atrial rate is 55 or less, or there is long-standing atrial fibrillation. Atrial synchronized pacing may prove more helpful when AV block and congestive failure co-exist. The asynchronous pervenous units are employed in the older age or poor risk groups, and in many cases where a second pacer is needed to replace a malfunctioning unit. Demand pacemakers which stimulate only if no electrical activity is detected in a pre-determined interval are at present in limited supply. These units have great theoretical advantage for those patients with intermittent block varying with a normal sinus rhythm.[2]

The majority of patients developed no complications and in no instance was there a demonstrated association between a pacemaker complication and a patient's death. The improved pulse generator circuitry and electrode design now available certainly make less likely the problems attributed to the pacemakers per se. In addition, experience has taught us to avoid angulation of the electrodes as well as exposure of the subcutaneous electrode to areas of pressure by more frequent use of the pectoral implantation site.

The local tissue problems are usually of chronic nature and for the most part can be managed conservatively for a considerable period of time. Our initial fear that infection present in one focus would rapidly spread along the subcutaneous implantation route of the pacemaker has not been borne out. Most situations of that nature respond for many months to local wound care and antibiotics; however, our experience has been that all infections invariably resulted in extrusion of the battery or electrodes requiring replacement of all or part of the pacemaker unit.

Threshold rise has been encountered in virtually all series as in ours. This has usually been remedied by increasing the current amplitude since it is thought to be related to myocardial fibrosis and resultant current impedence at the ventricular myocardium.[7]

The potential for ventricular perforation exists any time a foreign body is introduced into the heart. The one case of perforation that occurred in our series of 11 pervenous endocardial lead insertions was attributed to leaving the stylet inside the electrode lead as it was introduced into the apex of the ventricle.

All patients symptomatic at the time of pacemaker insertion were significantly improved as long as the unit functioned properly. Stokes-Adams attacks were eliminated, and several patients resumed gainful employment which had been abandoned for considerable periods of time preoperatively. Congestive heart failure improved in 5 of 7 patients as did the low output syndrome in all (5 patients) in whom it occurred. The hazards associated with the use of digitalis in patients with complete heart block were lessened considerably by the rate control afforded by use of the cardiac pacemaker. Competitive rhythm between pacemaker-induced impulses and the patient's intrinsic focus did not pose a significant problem in this series. In most instances the artificial pacemaker was the dominant pacing influence, and in the others quinidine suppression of the patient's intrinsic focus was sufficient. The one instance of sudden death which occurred in our series was not likely to have been the result of pacemaker-induced ventricular fibrillation as a result of competitive pacing. This patient was a 27 year old female who died suddenly while riding in a car nine months following complicated repair of a tetralogy of Fallot. We agree with Chardack that the risk of inducing ventricular fibrillation with the low current outputs of the pacemaking units is very small. This remains a controversial issue as evidenced by the recently reported experience of Bilitch et al,[8] emphasizing the potentially grave complications of competitive rhythm in patients with artificial pacemakers.

Summary

The experience at the Medical College and Roper Hospitals of Charleston, South Carolina with surgical management of heart block in 35 patients is reviewed. 29 patients (83%) have survived for periods ranging from one to 66 months. There was no operative mortality and only one hospital death. Of the five late deaths, only one was related to pacemaker malfunction. All patients were symptomatically improved following insertion of the pacemaker. An analysis of complications associated with pacemaker implantation is presented.

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A COACH'S RESPONSIBILITY TO HIS PLAYERS

ART BAKER
Clemson University
Clemson, S. C.

The South Carolina Medical Association has shown an active concern for the matter of safety in athletics. It's Committee on the Medical Aspects of Sports has been interested in promoting close relationships between athletic coaches and physicians. Dr. Judson E. Hair, chairman of this committee, has submitted this paper for publication.

The subject of a coach's responsibility to his players covers a lot of territory. However, at the same time it is a subject often neglected and not seriously observed by some.

While attending Presbyterian College, I had the opportunity to be in one of the late Coach Walter Johnson's Physical Education Classes. The course was entitled "Techniques of Coaching" and has to rank with the best of my college classes in doing me some good in my occupation in later years. Coach Johnson, who did so much for athletics in the state of South Carolina during the years when it was so badly needed, was by far one of the most unforgettable characters you could know. Although he never really told us how we could win, he and Coach Lonnie McMillan gave us great insight into our responsibility to our players. Often he reminded us that *"we should treat every boy on our team exactly as we would treat our own son or exactly as we would have someone else treat our son."*

Many grave responsibilities face us as coaches. First, it is our task to develop each individual in our care to his fullest as far as we are capable of doing. There can be no greater reward than knowing that you have helped some young athlete become a better man because his life has touched yours. It is not only our task to develop each boy to his best athletic ability but, furthermore, to develop him to his highest ability as a useful and productive citizen of tomorrow's world.

One of a coach's greatest responsibilities is that he be properly prepared to teach and coach these young men under his care. This, of course, is a continuous process taking long hours and many years to accomplish. I'm afraid that the coaching profession is no different from other professions; we have some lazy members too. These are the same in any profession—they don't know their job and they won't work or put forth much real effort to learn about it. Many are only fooling themselves. They go through the motions, put on a good front, "play the role"; but they never have and sadly never will pay the price in order to become useful tools of the trade. Sometimes the school system is at fault for hiring a coach who simply is not capable of doing the job.

A good example of how some coaches are too lazy to keep up with the trends of the game lies in the important problem of conditioning and squad fitness and also the development of strength and quickness so badly needed by all athletes. This, you see, takes work above and beyond the call of duty. Maybe it takes your free afternoons. I don't know too many winning coaches who have many afternoons off. Fred Hoover is our trainer at Clemson and a very good one! Having been selected president of the American Trainers Association, he recently made a study on our football squad. He made a close study of those players receiving injuries this year and found that the biggest majority of these injuries could have been prevented through participation in a sound and legal conditioning program that any coach in any school in South Carolina could demand of his own players. Many leading coaches in the state have had this program for many years. It would be very interesting to see how well they have kept down the injuries as a result. You can check their results in winning and losing—quite a good argument too. As coaches we have surely figured by now that we aren't going to get overtime or even pay for all the hours we work, in monetary value that is; but if this is what we're looking for then we'd best get out of it now. The real reward comes with the satisfaction of seeing a well-toned, precision-drilled team of *ours*, as a result of many hard hours of work *together*, go out on a Friday night and really do all those things you've spent all those hours teaching them to do. This is the real reward. To watch some little anemic-looking kid, who when he came to you couldn't tie his shoe lace, develop as the result of your patience and hard work so well that he can break open the biggest game of the year—that is the big pay off.

A coach has the responsibility to each boy who plays on his squad. I don't see how we can justify a football program in a public school otherwise. We should give each boy who comes out as much of our time and instruction as possible. It is our responsibility to develop each boy to the best of *his* ability. I know that we all devote most of our time to the "cream" of the crop; if we want to win we had better. But it has always been a firm belief of mine that we could all play a lot more boys than we do in games and still get the job done right. Just last year we had to play an unproven sophomore in our televised Duke game. We had just stated that week that we sure hoped we weren't faced with the necessity of playing him in a game of importance. Because of an injury, he was put into the game in a real tense situation, covering their best receiver. He intercepted the first pass they threw at him and went on to prove to be one of our leading defensive backs. Many coaches have separate specialists teams and through this means are able to play 35 to 40 boys a game. I'll guarantee the morale of these teams is at a high, and often real talent is discovered as the result.

We have all heard the saying about the losing coach, "Well, he's building character this year". Well let's hope that we are all concerned about the problem of developing character on our ball clubs. If there is one thing essential to winning it would have to be character. You have often heard, I'm sure, "you can learn as much character inside the 5 yard line as you can anywhere in life". I feel this is true; and I feel that it is true for one reason, that athletics can bring this quality out in a young fellow under pressure. Character stands out like a sore thumb on the good ball clubs. It's a basic fundamental to being a winner and to the total development of the young men who make up our ball clubs.

As coaches we have many other responsibilities to our players. Surely there could be no more needed quality of our athletic programs than that of developing discipline in the lives of our young charges. Athletics, it seems, are truly among the last barriers we have in this crazy world in which we live where a young person is really trained in the experiences of discipline. Never before in the history of the world have we needed more young people who know discipline. Nowhere is it taught more properly and effectively than on an athletic team. To teach and demand discipline we as coaches must first be disciplined ourselves. Most youngsters today don't really want something for nothing. It's just all they have been taught and expect in our society. I have seldom seen a good team and never a great team that lacked discipline. By all means let us demand discipline from our teams and from each of its members. For without discipline in the lives of our youngsters I hate to think about tomorrow's world.

We also have the responsibility to develop a sense of pride in our athletes. I sincerely believe that nothing worthwhile can be accomplished without pride. We must teach our athletes to strive for excellence and to be satisfied only with excellence ,the pride of being the best. This is the kind of pride we need to develop. We must have pride in ourselves as a person, pride in what *we* can do, pride in *our* school, in *our* community, and in *our team*.

Perhaps never in the history of the United States have we needed to develop loyalty so badly as today. Everywhere we look it seems some group of American youth is demonstrating against something, often nothing worthwhile. What kind of homes and schools must we have to be turning out such products. There is no phase of our educational program that can teach and demand loyalty as well as you, the coach, can through your athletic teams. There is no better example of loyalty than can be found on an athletic team. By all means let us develop this loyalty. Demand it, teach it in every way that you can in your programs. For I'm afraid without loyalty we are in for rough years ahead as Americans. I am firmly convinced that if all American students were a part of a good athletic program we wouldn't have the draft card burnings, the long-haired beatniks, the burning of our sacred "Old Glory", or the waving of the enemy's flag in our streets. I feel that athletics teaches and demands all that is contrary to these actions.

As coaches we have the responsibility of putting enthusiasm into the lives of those who engage in athletics. I cannot picture an athletic team being a winner without enthusiasm. Like a salesman trying to sell a product, he must be enthusiastic if he expects to make a sale. Often a good athletic team is directly responsible for putting enthusiasm into a student body or a community and this enthusiasm is directed towards many other worthwhile areas.

Perhaps one of our greatest responsibilities today to our young people is in teaching them how to win and how to lose. A real simple thing, we say, but the lack of this knowledge is exactly why so many of our young people are suffering from emotional problems today. They simply cannot face failure or in some cases success. Athletics teach players, through its coaches, that an athlete can accept both success and failure and learn from both. Certainly all of us want only to be winners, but we all know that we are going to lose our share also. One of the greatest tonics a coach can receive after the disappointment of a loss is to go out on the practice field and to see them eager to "go after the next one". This, you see, is part of the responsibilities we have as coaches to see that our kids settle for nothing less than winning. But when we've done the best we can, then we accept whatever happens. If it is defeat, then we can actually learn from this experience and can go after the next opponent with a little more vigor and wisdom.

Coaches have the added responsibility to their players to see that they are preparing themselves as best they can for the future. Sure, they have to be eligible by passing a certain amount of work; but you certainly don't settle for average or below average on the football field. Let this quality you demand on the field be demanded of your players in the classroom. Many young men today owe their college education and the good jobs they have to some coach who was patient and persistent enough to stay on their backs and develop them athletically as well as scholastically. The game of football today is complex. It takes a lot of learning and retaining or you can lose a lot of games. It is my feeling that if a young man can learn his assignments well enough to play on your ball club then he can learn well enough to get his education, whether it be college, technical school, apprenticeship or what. Let your boys know you are interested in their good grades. Keep six weeks progress charts where everybody can see them, talk to your players about their school work, and talk to them about their problems with teachers and parents. In almost every case the coach is the best counselor in the school program.

We must be honest with the young men we coach. I'm convinced that you can't fool them. You're only fooling yourself if you think you can. Never teach a boy that he can reach a right destination by giving him a wrong direction. One of the best lessons of athletics for a young man is that he usually gets just what he deserves, for what he puts into the game. For instance, I firmly believe and always try to convince our players that if we pay the price on Monday, Tuesday, and Wednesday then we'll get paid on Saturday. Isn't this true of life? Sacrifice is an essential quality to achieving success. We must convince our youngsters that athletics require a lot of time, sweat, pain and effort; but it's worth it—so is life. It's like the little boy who came home from school with a black eye. His mother said, "Johnny, who gave you that black eye?" Johnny replied, "Momma, nobody gives you these—you have to work for one like this!"

We as coaches should never take advantage of any boy no matter how poor a player he happens to be. If he isn't good enough to play and we assign him to hold dummies, then teach him how to protect himself while holding that dummy. Never use a boy as a live "dummy" without first teaching him how to protect himself. Let us remember we aren't doctors and shouldn't try to be. If a boy is hurt, then let the doctor decide this and accept his decision. It's good to have a doctor at each practice and especially at each game. Usually local medical associations will arrange for these if you will talk with them.

Finally, I feel that we have a moral obligation to each boy entrusted to us. As we coaches are separate individuals, we all will teach somewhat differently. That is good. But each of us has received the same special blessing from our Creator by having the wonderful opportunity, responsibility and talent of working with and influencing the lives of these young people. I feel that we owe a debt to God for this special blessing. I believe that we should use whatever influence we might have on these young lives for the good of His Kingdom. To me this is our greatest responsibility. We certainly aren't expected to be preachers or missionaries, but when we stop to consider the tremendous influence we have we certainly should guide these lives to the best of our abilities. Quite often we all need help in this great task and help is only as far away as getting on our knees and asking for it. We, too, have the responsibility of impressing this same thought on our athletes. They must realize that they have this talent because it was a gift to them from God. They should use it and develop it to the best of their ability. Something so important is the fact that our athletes influence the lives of so many of our younger generation. They should be reminded frequently of this responsibility and told how to use this influence to the utmost. Anything we can do along these lines will bring great dividends not only to our players, students and patrons, but to our own good health, lives and endeavors.

Perhaps this poem by an unknown author expresses the feelings of the place all of us fortunate enough to be in athletics should remember we hold.

To Any Athlete

There are little eyes upon you,
And they're watching night and day;
There are little ears that quickly
Take in every word you say;
There are little hands all eager
To do anything you do;
And a little boy who's dreaming
Of the day he'll be like you.
You're the little fellow's idol;
You're the wisest of the wise,
In his little mind about you,
No suspicions ever rise;
He believes in you devoutly,
Holds that all you say and do,
He will say and do, in your way,
When he's a grown-up like you.
There's a wide-eyed little fellow,
Who believes you're always right,
And his ears are always open,
And he watches day and night;
You are setting an example
Every day in all you do,
For the little boy who's waiting
To grow up to be like you.

POISONOUS PLANTS IN SOUTH CAROLINA. VII.

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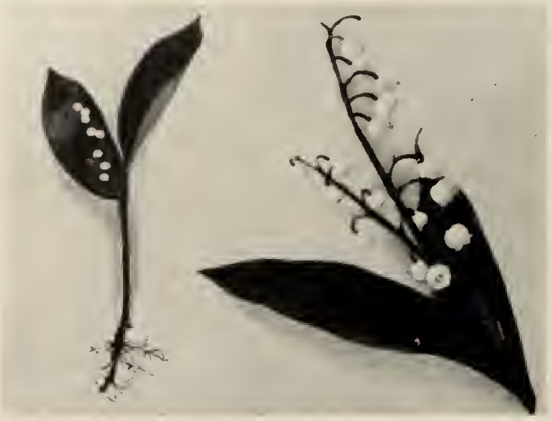
The subfamily Asparagoideae of the lily family is represented in South Carolina by both indigenous and exotic plants which are sometimes cultivated as garden ornamentals. Saponins with steroidal or triterpenoid genins are found in the underground organs as well as in the fruits and seeds of many species of this group. Ingestion of these parts, especially by children eating the berries, produces gastrointestinal distress to the point of gastroenteritis and emetocathartic action. Fatalities are quite unlikely.

A potentially dangerous plant of the Asparagoideae subfamily found in South Carolina is *Convallaria majalis* L. and its variety *montana* (Raf.) Ahles, the well-known lily-of-the-valley. This attractive plant found in wooded coves of the mountains and upper piedmont is rare in the wild but it is sometimes grown in gardens. The leaf, flower, fruit and rhizome all contain mixtures of cardioactive glycosides which can be fatal if enough is eaten. The leafless flower stalk bears a drooping one-sided raceme of fragrant, white, bell-shaped flowers. The fruits, which are seldom formed, are red berries about a half-inch in diameter.



Livestock may be poisoned by grazing the leaves and flowers; and children could also suffer from eating the flowers, fruits, leaves, or rhizomes. The digitaloid glycosides (strophanthidin compounds) have a more rapid onset of action than digitalis but a shorter duration and they are not cumulative. Fortunately their poor resorption and the emesis usually evoked by eating the plant parts has seldom led to fatalities. The saponin convallarin, said to be laxative, probably augments the emetic effects. Nausea, emesis, laxation, diuresis are the less serious manifestations which precede the toxic signs (substernal pain, arrhythmias, etc.) of serious heart involvement. A hundred mg of the dried rhizome and lesser amounts of the flowers is approximately equivalent to three ml of digitalis tincture.

Treatment of severe poisoning follows the pattern for digitalis poisoning, i.e. potassium salts orally, procaineamide intravenously.

TABLE 1

Common name	**Botanical name**	**Natural habitat**
Yellow Clintonia or straw lily	**Clintonia borealis** (Ait.) Raf.	mountains*[1]
White Clintonia or speckled bead lily	**C. umbellate** (Michx.) Morong	mountains*[2]
False Solomon's seal	**Smilacina racemosa** (L.) Desf.	piedmont & mountains*[3]
False lily-of-the-valley	**Maianthemum canadense** Desf.	mountains*[4]
Twisted stalk	**Streptopus roseus** Michx.	mountains*[6]
Twisted stalk	**S. amplexifolius** DC.	mountains*[5]
Hairy Solomon's seal	**Polygonatum pubescens** (Willd.) Pursh	piedmont & mountains*[7]
Small Solomon's seal	**P. biflorum** (Walt.) Ell.	coast to mountains*[8]
True Solomon's seal	**P. officinale** All.	cultivated
Smooth Solomon's seal	**P. commutatum** A. Dietr.	mountains*[9]
Walkerobin or brown beth	**Trillium erectum** L.	mountains (rare)*[10]
Beth root	**T. cuneatum** Raf.	coast to mountains
Nodding Trillium	**T. cernuum** L.	piedmont & mountains*[11]
Large-flowered Trillium	**T. grandiflorum** (Michx.) Salisb.	mountains*[12]
Indian cucumber	**Medeola virginiana** L.	coast to mountains*[13]

*Grown as a garden ornamental plant.

1. Terminal umbel of nodding greenish-yellow flowers; berry blue; leaf edge without hairs.
2. Terminal umbel of white flowers speckled with green and purple dots; berries black; leaf edge hairy.
3. Terminal panicle of small, greenish-white flowers; berries red with small purple spots.
4. Terminal raceme of small white flowers; berries brownish-red, speckled.
5. Single or paired greenish-white flowers from axils; berries red, on twisted peduncle; clasping leaf without hairs on edge.
6. Single or paired rose or purple flowers from axils; berries red; on twisted peduncle; sessile leaf coarsely hairy on edge.
7. One or 2 (or 3-5) axillary, drooping, greenish flowers; berry dark blue; lower side of leaf with short, soft hairs on veins.
8. Usually pairs of small, bell-shaped, greenish-cream flowers; berries blue-black; leaves without hairs.
9. Peduncles with 1-15 greenish-white flowers; berries blue-black; leaf glabrous.
10. One to four inch flowerstalk with maroon to brown-purple, varying to white or white blotched with purple flowers; berries purplish-red.
11. White or pink flower on short, recurved stalk.
12. Flower first white, fades pink, on erect stalk up to 3 inches; berries somewhat 6-lobed.
13. Umbel of small, pale greenish-yellow flowers with crimson stigmas; berries dark purple.

THE NEXT 50 YEARS IN TUBERCULOSIS ERADICATION

PHYLLIS Q. EDWARDS, M.D.**

I approach the topic of my remarks today, "Our Next 50 Years: Tuberculosis Eradication Program," with some anxiety. I have never relished the role of prophet, particularly in view of the progress and paradox of today's medical scene.

For over a century, public health records in the United States have listed tuberculosis as the principal communicable disease of insidious nature. Generation after generation of public health practitioners has predicted that within a few years this disease would no longer be a problem, or would become a disease of no public health significance. This notion was propagated by serious and knowledgeable men who had every reason to believe it, since the statistical reports that were available seemed to show that they were right. Yet, in the third quarter of the 20th century, I am uneasy about the predicition because tuberculosis is not only still with us, but remains a serious, stubborn disease which continues to threaten the health, welfare, and economy of the Nation.

We have come to realize that after more than 50 years of continuing battle, after the discovery of many potent medical remedies, and in spite of our great economic advances, we still have failed to conquer tuberculosis. The Nation's burden of tuberculosis is great. I would like to put into numbers, even if roughly, some of the magnitude of the problem.

We estimate that on January 1 of 1966, there were 325,000 people listed on health department tuberculosis registers in this country. On that day 100,000 people were known to have active disease. Approximately 40,000 of these individuals were receiving treatment -in hospitals, and 60,000 were under the treatment of clinic and private physicians. In addition, about 225,000 people with inactive disease were reported to be under medical supervision or surveillance of health authorities. These numbers, of course, depict the magnitude of the problem on a given day, but do not indicate the number of people taken care of during the year, or the quality of their treatment. The net figure would have to include about 50,000 new active cases found during the 12-month period, the 9,000 to 10,000 whose disease reactivated, and the many others who returned for additional care. A great deal of work was also being done locating, examining, and following contacts of newly diagnosed active cases as well as those suspected of having disease, and the surveillance of other cases. Altogether these last three groups could easily add up to another half-million people.

Finally, some 8,000 died of or with tuberculosis during the preceding year—another tragic index of the problem.

Now, if we use recent data for South Carolina and calculate the burden for this State as we did for the Nation as a whole, we find 1,200 active cases on the register during 1965, some 3,200 inactive cases whose disease was active less than 5 years ago, and about 3,800 contacts of newly reported cases. This brings us a total of 8,200 people in need of medical attention—a much larger total than the 758 new cases reported in 1965 or the 89 deaths. But we know there are still other people who are at special risk of developing tuberculosis and particularly those who are most likely to transmit it to others, should they develop active disease. As I have said, the burden of tuberculosis is great. I think one of the important recent developments is that we are beginning to look at the problem realistically.

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*Presented at the Fiftieth Anniversary of the South Carolina Tuberculosis Association, Columbia, South Carolina, March 30, 1967.

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But tuberculosis must not be gauged only by the comparative number of cases or the number of individuals needing public health supervision, but in our ability to heal and prevent disease. Another tragedy is in our failure to take full advantage of the best diagnostic, therapeutic, and preventive measures that are now available.

As most of you know, our mandate for the last 2½ years has been the Surgeon General's Task Force Report on Tuberculosis Control. Our joint activities in the Public Health Service and TB Associations are aimed at carrying out the Report's very sensible and practical recommendations. The impact of these activities has, I think we can all agree, been a rejuvenation of tuberculosis control endeavors across the Nation. The 10-year projection of the report was to reduce the number of new active cases from 52,000 to 21,000 during a period of 10 years, to reduce the number of relapses from 10,000 to 400 during the same period, and to reduce annual hospital costs from $335,000,000 to $96,000,000—no small achievement.

Periodically, in our optimism, we talk of eventaully eradicating tuberculosis and I believe that with the current surge of interest and activity, we are doing much to reach this goal. The effective use of chemotherapy and chemoprophylaxis has given added weight to our belief that there are practical ways of achieving this. We often point with pride to the virtual elimination of tuberculosis in cattle, and draw inference that this, too, can be done in the human population—admittedly with different and less drastic techniques. There is much to support this point of view. However, too often we must answer why, with all the modern medical and public health resources at our disposal, and with the vast sums being spent each year in the interest of science, we are making such slow headway against tuberculosis. There are, of course, many answers to this question.

One of the stumbling blocks in our approach to tuberculosis as a disease entity is, I believe, to accept the point of view that infection is, or will be, as important as disease. To those of you who may be disturbed by this statement, I want to say that it is not my intention to suggest that a person found to be positive to a tuberculin test should be reported as a case of active tuberculosis. No one today that I know of is ready or willing to make this kind of recommendation for a number of practical, scientific, and technical reasons.

First of all, even the most precise of existing tests to determine infection with *M. tuberculosis* are imperfect and not sufficiently specific. Unfortunately, we cannot be certain that a positive reaction to the intradermal 5 TU tuberculin test is necessarily caused by infection with tubercle bacilli. From a vast number of research studies on tuberculin sensitivity we have come to realize that the response to the tuberculin test does not provide a simple "yes" or 'no" answer. What the test can do is provide us with a probability judgment or the *likelihood* that a particular reaction is or is not caused by a tuberculous infection. The degree of probability is based on the relative size of the reaction to a particular dose of tuberculin—hence the importance of using the Mantoux method with a measured dose of PPD, and of measuring the size of the reatcion. Second, there is no specific test to determine activity of tuberculous disease. Wouldn't it be wonderful if we had a quick, sure, easy test, such as a simple blood test: catch a drop of finger blood on a piece of blotting paper . . . if the paper turns red—voila!, it means the presence of living bacilli in in the body; if it stays green, then there are no bacilli. But no such simple test or, indeed, any other simple test is now available. Third, our present-day tuberculosis drugs are not as efficient as they might be: two years is a long time to keep a person on treatment. We need a one-shot, sure-cure drug to kill all living tubercle bacilli in the body. But we have no such drug, as yet.

I believe there will be several significant alterations in our attitudes and concepts about tuberculosis. The first I have mentioned, "that infection will be as important as disease", may be difficult to accept now. Yet for many other conditons which we call disease, the close association of infection and disease gives us little difficulty. Take, for example, smallpox. Because of the high degree of serious and often lethal outcome of the disease, mere exposure, let alone infection, is tantamount to disease. We react quickly, and call for emergency measures to prevent the development of disease. In tuberculosis, in which only *some* of those infected develop clinical disease, it is harder to accept the notion that infection is or may become so serious. But it *is* serious, because once infected, the potential for developing disease may remain with that individual for life.

The obvious solution to eradication of tuberculosis at present, then, is to prevent development of disease in persons already infected; and, at the same time, to prevent all new infections from taking place. The question is not whether we have the ability or techniques to halt the development of disease and the transmission of infection, but do we have the energy and determination to make the necessary effort?

If we accept the premise that infection is a serious condition, then 25 million Americans are already at risk of developing clinical disease sometime in the coming years. Fortunately, only a small proportion of these persons develop active disease each year. But the seeds are there and the essential element of risk is present. Since they have already been infected, many of them may be expected to harbor bacilli for the rest of their lives. Only attrition through death can entirely remove this group from our concern as potential victims of tuberculosis. If we happen to know who these infected persons are, measures can be taken to reduce their risk of developing disease to negligible levels.

Universal prophylaxis is a possible, but highly unfeasible, solution at this time. To give isoniazid to 25 million people in one year is hardly realistic. However, in the normal course of medical and health department activities in the years ahead, it is not inconceivable that many of these millions can be reached one way or another. Our program today places great importance on this kind of approach for children, because children can be readily reached. Unfortunately, we have less direct access to large groups of the adult population. From an epidemiological viewpoint, what can we do for these millions of already infected persons? You are familiar with most of the program priorities. First, take care of those who now have active tuberculosis, and make sure they receive the best of care. Once disease has become inactive, make sure they stay well by prolonged surveillance. Relapses are an indication of failure. Since disease breeds disease, look for it among contacts. Similarly, if a person is suspected of having tuberculosis, find out if it is so.

What of the future? Even with today's complex electronic devices, the crystal ball is probably a more prudent method for our purpose here today. It is quite difficult to program judgment into a machine when part of the cerebration calls for intuition.

Before the end of this century, any new infection caused by tubercle bacilli will be considered to be as serious as disease, and will immediately call for chemotherapy for the individual and an all-out epidemiological search for the infector. The already infected will still be considerable, and even 50 years from today, with 100 million more people and proportionately more reaching old age, there will be several million who might be considered positive reactors by our present standards. It is to be hoped that by that time no one will reactivate his disease, and perhaps new chemotherapeutic agents will have sterilized all viable bacilli in the individual human host. During the intervening years, surveillance of the population which we now consider to be at high risk of developing disease will be a matter of information retrieval through automated data processing. Each person's health status from birth to death will be documented and under appropriate safeguards, easily accessible to the physician.

It has been suggested that a population free of tuberculous infection will be one that is ripe for epidemic tuberculosis should a natural or man-made catastrophe occur. Evidence is at hand that infection with a typical mycobacterium is widespread, and that this infection confers a degree of protection against tuberculous disease. Micro epidemics, if they do occur at rare intervals, will be treated as major failures in tuberculosis control programs. They will be promptly controlled with treatment and chemoprophylaxis. Tuberculosis deaths will be rare, and conditions which permit new cases to arise will not be tolerated by an enlightened public.

I anticipate that other major advances will be made in public health, education, welfare, and living conditions, and that their combined effect will have a cumulative salubrious impact on our grandchildren. In essence, the things mentioned above are not totally the product of an active imagination, but are based on realistic appraisals of the current scene. On a small but growing scale, they are all going on today; and the groundwork is thus already being laid to make them common practices throughout the United States.

I believe that we will continue along the path of evolution, compromise, and adaptation to change. And I am fully confident that the next 50 years will mark considerably more progress than the last 50.

THE USE OF ALLPYRAL IN THE MANAGEMENT OF 686 ALLERGIC PATIENTS

AUSTIN T. HYDE, JR., M.D.
Rutherfordton, N. C.

This paper presents a summary of five years investigative work on the evaluation of Allpyral,* an alum-precipitated extract. This substance which is used in the hyposensitization of patients with allergic symptoms was evaluated on patients primarily from the Piedmont area of South Carolina and North Carolina. As it represents results of therapy of patients localized mostly in the South Carolina area, it seemed pertinent to present the results here.

Good reviews on the preparation of Allpyral are scattered throughout the journals. The original work was done by Fuchs and Strauss[1], and the development of the product for commercial use has been essentially that of Miss Strauss working in conjunction with Dome Chemicals. The product is different from the conventional aqueous extract used by most allergists in that the whole pollen is defatted and then extracted in pyridine. It is then precipitated with potassium aluminum sulfate and produces a complex of alum and pyridine. The precipitate is then washed until it is completely free of excess pyridine and alum, and finally this insoluble complex is placed in a suspension of a special saline medium standardized in protein nitrogen units (pnu) at either 10 or 20,000 pnu per ml. This material is unusual in that it is colored rather violently from yellow to gray and is flocculent, settling to the bottom of the tube suspensions. It therefore is mandatory that the substance be well shaken when it is being prepared for dilution or prior to the administration to the patient.

This method does several things to pollen extracts. One is that it eliminates some of the lower molecular weight fractions which perhaps aggravate the seriousness of reactions. Certainly the material is much more slowly metabolized and absorbed into the system. In our experience and in the experience of others[2] who have used this material, we have been impressed by the fact that the toxicity is remarkably little compared to the aqueous extract and that the percentage of local reactions is much less. The number of local reactions in our 686 cases was approximately 20 and we had no systemic reactions in these cases. The investigation of patients in this series was carried out in a conventional manner with a complete general history, allergic history, and physical examination, plus skin tests done with aqueous materials.* Our method is to do scratch tests first and then recheck all of the negative scratch tests with intradermal materials at 1:1,000 dilution.

The patients are seen routinely two months after hyposensitization has been started and then usually on an annual basis thereafter unless there is difficulty. We have been keeping consecutive tabulated records on all of our patients, including all correspondence and personal visits. We utilized a person from outside the usual personnel of the allergy clinic to evaluate the response to treatment. In cases where any questions asked were not answered, we reached the patients personally or the patient's family physician. We feel that the evaluation on this group is quite thorough and up to date, ending at the point of the cessation of the ragweed season for 1966.

Of the 686 patients, 444 were placed on Allpyral from the very onset. Two hundred and forty-two represent conversions from aqueous therapy either because of failure to respond to the aqueous program satisfactorily or for reasons of

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*Supplied by Geer Drug of Lenoir, North Carolina.

Read at the meeting of the South Carolina Medical Association, May 9, 1967.

patient convenience such as local reactions or desire to reduce the frequency of injections. These conversions from aqueous therapy are carry-over patients from earlier years and do not represent conversions within this year.

Table 1

SENSITIVITIES

Dusts, Epidermals, Molds	80
Grass and Plantain	44
Trees	10
Fall Pollens	50
Insects	32
Combinations of above	523

In terms of the results of therapy, 536 out of the total would be classified as representing no therapeutic problem, i.e. needing no medical visits, no supplementary medications, and no need to modify extracts. These were classified as our A group.

Table 2

RESULTS OF THERAPY

Class A	536
Class B	58
Insufficient Time	55
Failed to return	25
Converted to aqueous	11
Unable to reach	12
Unwilling to change	11

The group of 58 patients still having difficulty was rechecked to see if there was any difference in their extracts in order to determine whether there was a problem in terms of the specific types of symptoms and type of hyposensitizing material that was being used. We had 29 patients on fall pollens, 9 of whom would be classified as having an A response to fall pollens but a B response to either the grass or the perennials. In the grass and plantain group we have 10 A's and in the dust and epidermals group we had 19 A's. The results in this group would indicate that in terms of the pollens, they didn't do as well as with their perennial maintenance vaccines by a score of about 2 to 1. Beyond this there were 22 patients who were having trouble on a perennial basis, evidently in combinations of all three factors. We also thought that it would be interesting to see how many were new patients, how many were converted, to see if the selection from conversion to Allpyral made any difference. In this we noticed there were 34 new patients and 22 who were converted or a ratio of about 1½ to 1. This compares with the group in the A classification in which there were 333 new and 197, or not quite 2 to 1. I think probably this is of no significance as the ratio of new to converted for the total series was again 2 to 1 and any difference that we try to interpret here is probably unwarranted.

We would like to comment on another special group, of 32 patients on stinging insect mixture, all of whom are on Allpyral from the beginning. We have had no local or systemic reactions in this group. Of the five patients challenged, all reported marked improvement and little or no reaction on re-sting in contrast to the former reactions which would have all been called at least systemic reactions, with disseminated urticaria and other manifestations of systemic involvement. One of these was interesting in that he was stung about half way through his course of treatment and had a fairly large local reaction but no systemic effect, whereas when he was stung again some six months later, he had no local reaction.

In terms of safety of this material, in our experience we have had only six local reactions that we would call distinct and significant, resulting in modification of the schedules and in one of these actually the treatment had to be discontinued, as we could not get the patient to take any further injections, even in marked dilution.

We have had 686 patients in the group under discussion and feel in general that the results are quite satisfactory. We have had little difficulty in administering the material, though 95 per cent of injections have been done in other doctors' offices following our schedules. The material is evidently quite flexible, due apparently to its delayed breakdown and slow absorption. As previously noted, we stopped at 5,000 pnu as our top dose but probably from time to time will exceed this in patients who seem to be refractory on the basis of inadequate protection and who have had no local reactions from the material. If the information from other people using the material is accurate, I would expect that these patients will still remain treatment failures. Coseasonal therapy continues to be used to a minimal degree.[3] We are aware that it can be done and get along with it fairly well, but am not greatly impressed. We have had no trouble in transferring patients on aqueous extract, simply converting from the equivalent pnu in the aqueous to the same in Allpyral and going on from there. This again is not true in reverse.

The use of Allpyral extracts as a method of hyposensitization is satisfactory. The material in our hands has been exceptionally safe and well tolerated, and the clinical results to my mind have been at least of the same order as other methods of hyposensitization. The insect mixture to my mind offers many advantages over the conventional aqueous preparation, and we are now using it exclusively.

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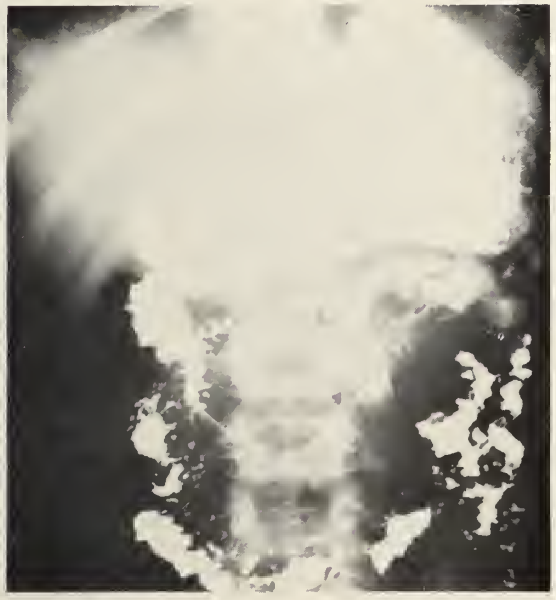
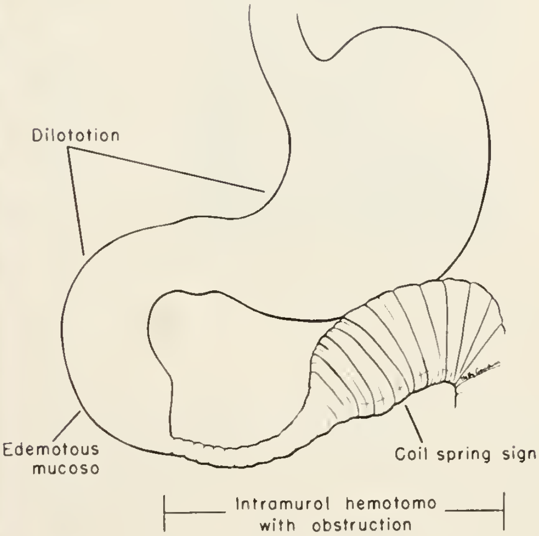
Hiatus Hernia Without Esophageal Reflux—T. Gahagan **Arch Surg** 95:595-605 (Oct) 1967

Large hiatus hernias without esophageal reflux (sometimes called rolling or paraesophageal hernias) often are not considered for operation because of lack of symptoms. Many of these cases, however, come to emergency operation at advanced age with complications of hemorrhage, perforation, or torsion resulting in a high operative mortality. The present series consists of 60 patients with rolling or paraesophageal hernias, most of them operated on electively, with no mortailty and a 5% recurrence rate. Thirty-three had severe preoperative bleeding or anemia. The low recurrence rate is thought to be related to the normality of the esophagus in this type of hernia.

X-RAY FILM OF THE MONTH

FRANK H. GRUBER, M.D.
Roper Hospital
Charleston, S. C.





The average reader of this page will be faced with at least one case of hematoma of the duodenum during his span of practice. Since both the radiographic and clinical pictures are typical, a minimum investment of time on the subject should insure a successful diagnosis in this encounter.

Several hours to ten days (average one to two days) following an abdominal injury the patient will complain of colicky abdominal pain, nausea and bilious vomiting. The injury may have been minor and almost forgotten. Upper abdominal tenderness, possibly a palpable mass and usually leukocytosis are present.

The hematoma may involve any area of the wall of the duodenum but usually the subserosal or submucosal areas. The third and fourth parts of the duodenum are most commonly involved. This segment of the doudenum is fixed in position anterior to the spine and is more exposed to trauma than the remainder of the bowel.

The hematoma flattens the lumen in one diameter and widens it in the opposite diameter, producing a cross-sectional ellipse. The mucosa over the hematoma is stretched transversly. When seen "en face" it presents the coil spring sign, much as is seen with intussusception. If the lesion lies in a different plane or if the hematoma is more extensive, the obstructed segment will have the appearance of any intramural mass. The mucosa is edematous throughout the area of involvement and an obstruction is present.

The film presented here is that of a ten year old boy with an obstructing hematoma involving the third and fourth parts of the duodenum. Typical but poorly reproduced radiographic findings are clarified by the illustration.

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1. Mathewson, C. & Morgan, R. Intramural Hematoma of the duodenum. Amer J Surg, 1966, 112:299-307.
2. Webb, A. J. & Taylor, J. J. Traumatic intramural hematoma of the duodenum. Brit J Surg, 1967, 54:50-56.

President's Page

Poor office management can and often does betray the best trained, best intentioned physicians. I refer particularly to lack of consideration of the *patient's* time. We hear and read so much about the overworked, harassed physician that we are apt to believe it and tend to rush through the day in a mad scramble. The patients get tired, the physicians get tired and everybody winds up angered and frustrated.

A little planning, a little organizing and most of this problem can be resolved. One plan will not suit every physician's circumstances. Some plan will help most physicians and their patients.

Let me suggest, for instance, offering patients appointments. Any physician can make appointments at least of a sort. The office help of a surgeon can routinely explain that the physician will try his best to be on time—subject to the vagaries of emergency room calls, etc. The general physician can modify his appointments subject to the completion of home calls, etc.

It is pleasantly rewarding to see the appreciation of patients when they are offered even a provisional appointment. They understand then that the physician appreciates the patient's time and is at least trying to conserve it.

Emergency office cases without appointments (in my practice these are mostly foreign bodies in the eye) can usually be sandwiched in between appointments—with an explanation to the patients with appointments if they have to be kept waiting.

Patients who come in without an appointment and who are not emergencies can simply be told that they will be seen as soon as possible but that the patients with appointments will be seen first. If such patients object I would encourage them to go to another physician.

If a patient is simply asked to come to the office "Next Tuesday," for instance, that means anywhere from seven o'clock in the morning until seven or eight at night, depending on the patient and his habits. For a patient to be given such a vague instruction and then to come and sit for an hour or two or four and still not be told anything as to when the physician expects to see him is humiliating and frustrating, even maddening, to the patient, and I for one don't blame him.

A little planning, a little attempt at a schedule, *obvious* consideration of the patients' time, will make for happier patients, happier office help, and a more appreciated physician. Try it and if it does not work blame me!

Norman O. Eaddy, M.D.

President

Editorials

Cures for the Shortage of Physicians

The lament has been loud and long that the supply of doctors is inadequate, and it appears to be swelling in volume. The causes have been expounded fairly clearly, from a lack of medical schools to the dreariness (as viewed by some) of small town life. Technical advances in medicine have made the new physician dependent on the equipment and organization of hospitals or clinics of some considerable size for performing the kind of practice that he has been taught—and on and on to various involved sociologic situations.

More schools are coming: fourteen new ones are planned. Old schools are enlarging. It will require more than a decade before the expanded activities can begin to grind out the needed additional physicians, and by that time even more will be needed.

How to tide over the years immediately ahead is the present pressing problem. Among the proposed measures is the development of the "assistant doctor", someone trained to perform under the doctor's supervision many of the procedures that do not require profound medical knowledge. It has been suggested that medical corpsmen from the Armed Services could well move into such a position without compromising the doctor-patient relationship. Promotion of group practice is considered desirable, to encourage cooperative efforts and to decrease overlapping. The computer is seen as a developing helpmate for the harried physician, though no degree of replacement can be visualized. Then there is the realization that many more women might go into medicine to plug the gaps permanently.

For the smaller community, solo practice seems pretty well on the way out, though not entirely. Even a solo is better than no music.

Better means of communication, better and safer roads, even helicopters, may bring improvement in availability of the services of the independent physician.

Will doctors, patients, and the legal profession accept such arrangements? Agreement by all parties seems rather obscure and possibly remote. Meantime, medical service to the population becomes more and more scanty and acceptable cures for the situation seem difficult.

Generic Prescribing

Efforts by Senator Russell B. Long to ramrod has bill for compulsory generic prescribing through the Senate fortunately seem to be meeting much obstruction. Most recent obstacle has been Dr. Goddard of the Food and Drug Administration, not usually looked upon as a great friend to the medical profession and always recognized as a stern critic of the pharmaceutical industry.

Senator Long wants a firm formulary, a sort of prescriber's Bible, which would tell the practicing physician just what drugs he could prescribe, at least for the huge and increasing number of patients supported medically by government money. Dr. Goddard goes along with rigid regulation of drug products and the use of generic prescribing, but he says he can't put the stamp of approval of purity and quality on every drug on the market, certainly not before 1970. Perhaps by that time the pressure from the senator will be long gone, for which event we may fervently hope.

The Duke Endowment

Those who have no occasion to read annual reports may fail to recognize the large and continuing flow of money from

Fairview, Inc.

1950-1967

"God is our Strength"

Fairview owns and operates four institutions, dedicated to treatment of specific types of illness.

Detoxification

Since 1950 the name Fairview has stood for integrity in the treatment of the alcoholic and excessive drinkers.

Two hospitals for detoxification are now under Fairview supervision.

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Rev. Maxie C. Collins, Administrator

Travelers Rest, South Carolina, Phone 834-9095, P. O. Box 277
W. M. Shirley, M.D., Medical Director
Earline Langley, L.P.N., Head Nurse
Mrs. Dorotha Garrett, Administrator

Rehabilitation

The rehabilitation program for alcoholics at Fairview has drawn patients from 20 states and every county in South Carolina, from Cuba, Canada, Germany, Europe.

It combines medicine, psychology, and religion with work therapy, group therapy, personal counselling, a 30 day program.

Geriatrics, Convalescents, Long Term Care

Fairfield Home, a 65 bed Class I nursing home fully accredited by the American Joint Commission on Accreditation, certified for Medicare. Non-discrimination because of race, color, or creed.

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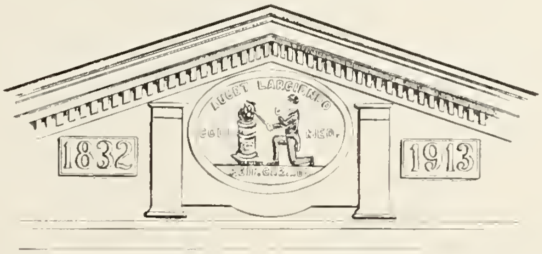
For better care, greater concern, by people who care.

the Duke Endowment into the fields of education, hospitals, child care, and religion.

Last year 15 South Carolina hospitals received $410,000 in financial assistance for construction equipment and purchase, and $571,914 for free bed care went to 58 hospitals in the state. Two hospitals received $60,00 for medical education programs. Seventeen Orphan Homes got $176,249.

Even if tobacco isn't good, its byproducts certainly are.



Medical College of South Carolina

The Medical College motion picture, "These Are Your Years" is now being filmed. Camera crews from Jerry Fairbanks Productions of Hollywood, Calif., have arrived in Charleston, and shooting was scheduled to continue through Oct. 20.

The half hour, color film was directed by Robert Rosencrans. Mr. Rosencrans has been in Charleston since Sept. 26 making scheduling arrangements with William D. Huff, Asst. to the President for Development.

After the shooting schedule has been completed at the Medical College, there will be a week or ten days of work done on the film footage in Hollywood to produce a work print. Also, scenes will be shot on stages built to correspond to situations at the Medical College, and the professional actors and their dialogue will be included.

The production of this flm will involve many details and will take in almost every area of the MCSC operations.

Dr Horres Elected To Amer. Physiological Society

Dr. Alan D. Horres has been elected to full membership in the American Physiological Society, which also carries membership in the Federation of Societies for Experimental Biology. His election into the A. P. S. raises the number of members in the state from 5 to 6 and the Medical College membership from 4 to 5, while raising the S. C. membership in the Federation to 19, of which 12 are faculty members here.

Dr. Groom Participates In Canadian Conferences

Dr. Dale Groom was a guest speaker before a symposium on medical education sponsored by the Canadian Medical Assn. at the Univ. of Toronto and Scarborough College in Toronto, Sept. 14-16.

Together with Mr. Dave Smalley of the ETV Center, Dr. Groom participated in the "Festival of Medical Television" at the Univ. of Western Ontario in London, Ontario, Sept. 8-9.

Also during Sept., Dr. Groom attended an invitational conference on postgraduate education at the Univ. of Kansas and addressed the annual convention of the American Medical Writers Assn. in Chicago on the subject of "Newer Media of Communication in Medicine."

Dr. Williamson Addresses Medical Groups

Dr. H. Oliver Williamson addressed the Providence Medical Assn. on Oct. 2 and the Monongalia County Medical Society of Morgantown, W. Va. on Oct. 3. He spoke on the subject of "Recent Advances in Oral Contraceptives." He will speak on a similar topic before the Thomasville-Albany Medical Seminar on Oct. 26-27, in Albany, Ga.

On Sept. 27-30, Dr. E. J. Dennis presented a paper at the J. Marion Sims Society meeting in Pinehurst, N. C.

Dr. Frederick H. Shipkey has joined the Dept. of Pathology as a Sept. 1 as Assoc. Prof. He will direct surgical pathology activities.

Dr. F. W. Kinard spoke at a seminar held during the 7th Southeastern School of Alcohol Studies at the Univ. of Ga., Aug. 13-18.

Dr. Peter Hairston spoke at Clemson Univ. on Sept. 26 on "Relation of Cardiovascular Surgery to Engineering."

Dr. W. J. Dougherty attended the Electron Microscopy Society of America meetings in Chicago, Aug. 28-Sept. 1. He presented a paper on "Ultrastructural Localization of Acid Mucosubstances in Skeletal Muscles."

Drs. W. K. Mylin and R. F. Hagerty presented a television program on ETV Sept. 14 on "Modern Concepts of Cleft Lip and Cleft Palate Treatment."

Dr. Lee Speaks At Thrombotic Disease Conference

Dr. William H. Lee, Jr., attended a conference on Thrombotic Diseases at Uppsala, Sweden, Aug. 28-29, where he spoke on "Experimental and Clinical Experiences with Polysaccharide Plasma Expanders in Thromboembolic Disease." (By Lee, Russell, and Cooper) An international cooperative protocol was developed to study the use of dextrans in thrombophlebitis. The MCSC will participate as one of 8 centers in the USA.

Dr. Lee attended Cardiovascular Seminar in Smolenice, Czechoslovakia, Aug. 31-Sept. 1, and spoke on "Pathophysiology of Pump Oxygenator Perfusion." (By Lee, Cooper and Matsuura.)

Dr. Moore Leaves

Dr. McKenzie Moore of the Pathology Department moved to the Charlotte, N. C. in October. He will work in pathology at Charlotte Memorial Hospital.

DOCTORS IN THE NEWS

Dr. Charlotte Sanner, wife of the Rev. Richard E. Sanner, will practice medicine in Sandy Springs. She received her M.D. degree in 1969 from the Woman's Medical College of Pennsylvania in Philadelphia. She served two years of residency in internal medicine at Emory University and the Atlanta VA Hospital, and one year internship at Grady Memorial Hospital in Atlanta.

Dr. Roland W. Penick of Philadelphia has been named Greenville County's new health officer. A native of Georgia and a 1949 graduate of the Medical College of Georgia, Dr. Penick assumed his duties in September. *Dr. J. Rutledge Lawson* has joined Dr. William D. Gilmore Jr. and Dr. Jim F. Hicks in the practice of pediatrics in Greenville. Dr. Lawson is a native of Sumter and was graduated from the Medical College of South Carolina. *Dr. Hal H. Crosswell Jr.* has associated with Drs. Shepard N. Dunn, Edward D. Hopkins Jr., G. Lynn Derrick and Robert P. Bland Jr. in the practice of ophthalmology at 1520 Laurel Street, Columbia. *Dr. Louis Roempke* has moved to Beaufort where he will be associated with Dr. Hugh O. Pearson Jr. at 1009 Bay Street. Dr. Roempke is a graduate of the Medical College of South Carolina.

Dr. Marcelino Chavez has established an office in Spartanburg for the practice of neurological surgery. A native of Peru, Dr. Chavez has come to Spartanburg from the Medical College of Georgia where he held an assistant professorship. The Seventh District Medical Association held its annual meeting this fall at the Sunset Country Club in Sumter. *Dr. S. Perry Davis* presided. Speakers included Dr. Timothy Takaro of Osteen, N. C. and *Dr. Donald E. Saunders Jr.* of Columbia. Officers of the association include *Dr. Thomas M. Davis, Dr. Robert Lumpkin, Dr. L. B. Keels, Dr. Herman Denny, Dr. Davis Moise*, and *Dr. Howard Poster*. Dr. J. W. Jervey Jr. and Dr. Augustus J. Goforth Jr. have announced the association of *Dr. E. Darrell Jervey* in the practice of ophthalmology at 709 Dunbar St., Greenville. Dr. Jervey was graduated from Episcopal High School, the University of Virginia and received his M.D. at Duke University. Dr. Jervey is a diplomate of the American Board of Ophthalmology. *Dr. Bessie Mae Beach* of Columbus, Ga. has become medical director of the Maternal and Infant Care Program of the Greenville Health Department. She was born in Seymour, Indiana and was graduated from the University of Cincinnati and the University of Cincinnati School of Medicine. She is a Diplomate of the American Board of Pediatrics.

Dr. Chapman J. Milling, Columbia physician, has recently had published a new book entitled "Buckshot and Hounds". Dr. Milling is a native of Darlington and an authority on South Caroliniana, the American Indian and English folklore. *Dr. Russell Walden*, 81, who has been practicing medicine in Landrum since 1912, was recently honored by his friends and community. The annual Pee Dee Medical Society Doctor-Lawyer meeting was held at the Cheraw County Club in October. The guest speaker was Sen. J. Strom Thurmond. Host Society was the Chesterfield County Medical Society. *Dr. J. K. Newsom* is president; *Dr. B. E. Coggeshall*, secretary-treasurer. *Dr. E. Kenneth Aycock*, South Carolina State Health Officer, recently spoke at a meeting of the Sumter Rotary Club, and at the annual open meeting of the Easter Seal Society of Aiken. Dr. Aycock is serving as chairman of the newly created South Carolina Pollution Control Authority.

Other members include *Dr. Richard W. Hanckel* of Charleston and *Dr. John B. Martin* of Anderson. *Dr. William R. Wallace of Chester* has been selected to appear in the 1967 edition of "Outstanding Personalities of the South." Dr. Wallace has practiced medicine in Chester since 1909 and was president of the South Carolina Medical Association and president of the Tri-County Medical Association. For many years he served as chairman of the Executive Committee of the State Board of Health. In October 11 South Carolina surgeons became Fellows of the American College of Surgeons. They are *Dr. Guy C. Heyl Jr.* of Aiken, *Dr. Gilbert B. Bradham, Dr. Charles T. Fitts, Dr. H. Biemann Othersen Jr.*, all of Charleston; *Dr. Harry J. Metropol* of Columbia, *Dr. William S. Houck Jr.* of Florence, *Dr. Emmett W. Flynn Jr.* of Marion, *Dr. Lawrence P. Thackston Jr.* of Orangeburg, *Dr. Kenneth T. Williams, Dr. William C. Elston* of Spartanburg and *Dr. Hubert O. Platt* of Rock Hill.

Author *Dr. Joseph Ioor Waring's* second volume of the History of Medicine in South Carolina is complete and in the final process of printing. Publication date is imminent.

Chiropractors were admitted to the group of health practitioners allowed to participate in New York's Medicaid program, the state departments of health and social welfare reports.

FACTS COUNT

IN PLANT SITE SELECTION

facts count, too, in selecting health care coverage

Companies selecting South Carolina sites for new plants invested over half a billion dollars on new manufacturing facilities in 1965, more than double the previous year's record. This brings the new industrial investment figure for the past six years to a high of nearly two billion dollars. During this period, well over 100,000 new job opportunities were created in South Carolina.

Many facts count for companies in selecting plant sites. A ready labor market, low utility costs, favorable tax rates, and the total cultural environment of the area are some of the facts that count for companies coming to the Palmetto State.

Facts about health care coverage count for companies when they review employee benefits. Some 2,500 South Carolina companies have already made the facts count. They have chosen Blue Cross and Blue Shield. It's the realistic health care program because coverage is based on the actual care required for recovery. Another fact that counts for new as well as long-time South Carolina industries . . . dues are determined by the health care needs of South Carolinians.

Call your experienced Blue Cross and Blue Shield representative soon. When he has given you all the facts about health care coverage, you'll choose Blue Cross and Blue Shield.

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THE MONTH IN WASHINGTON

The American Medical Association urged that Congress precisely define "public health services" to prevent the so-called "Partnership in Health" legislation being used as authority for unlimited expansion of government medicine.

In a letter to Chairman Lister Hill (D.-Ala.) of the Senate Committee on Labor and Public Welfare, Dr. F. J. L. Blasingame, executive vice president of the AMA, said:

"We are especially concerned with a lack of definition with respect to comprehensive public health services. Neither 'comprehensive' nor 'public health services' is defined in the law or the bill. While we recognize there is supportable advantage in removing strict categorization of grant funds, we are concerned that the categorical identification having been removed, there will no longer be any limitation on the health care which may be provided. Indeed, from testimony on this legislation by government officials, it would appear that our concern is justified. It is the intent that the Congress is authorizing a program of *individual treatment* for *unidentified patients* for *unspecified conditions* for *unlimited services?* It is clear that the lack of definition of 'public health services' is, in effect, an invitation from Congress to unlimited expansion of 'public health' beyond its traditional role in the community.

"The AMA has supported, and continues to support the furnishing of public health services. We have also supported flexibility of operation within the state and local health departments as an effective tool for community health. We feel, however, that the distinction between the public and private health sectors should be delineated . . . in more positive terms than the mere prohibition against interference with the existing patterns of private professional practice. . . . Accordingly, the Association finds itself unable to support this portion of the legislation providing for an undefined program of comprehensive public health services."

The AMA also opposed a provision for federal licensure of clinical laboratories on the ground that licensing of such facilities traditionally has been a state matter.

"We believe that federal licensure of these facilities would establish an undesirable precedent," Dr. Blasingame said.

MEETINGS

American Rheumatism Association's 13th Interim Scientific Session will be held at the Sheraton-Belvedere Hotel in Baltimore on January 19-20.

The session is sponsored by The Arthritis Foundation. Fifty papers will be presented on recent developments in arthritis and rheumatism research.

For more information contact: Executive secretary, Miss Margaret M. Walsh, 1212 Avenue of the Americas, New York, N. Y. 10036.

The First International Conference on Prematurity, sponsored by the AMA Committee on Maternal and Child Care, will be held January 11-13 at Pier 66, Ft. Lauderdale, Fla.

Those interested in receiving additional information about registration are asked to write Wesley J. Duiker, secretary, Committee on Maternal and Child Care, AMA, 535 North Dearborn St., Chicago, Ill. 60610.

Specialists in internal medicine in North Carolina will hold a scientific meeting in Durham Dec. 7-9 under the auspices of the American College of Physicians. For more information contact Monroe T. Gilmore, M.D., 1351 Durwood Dr., Charlotte, N. C. 28204.

S.C.A.L.P.E.L.

All members of the South Carolina Medical Association will soon receive from SCALPEL two re-registration forms which you can fill out, have notarized and mail for your convenience. We must work to see that no physician in the state loses his elegibility to vote in any national election. When you receive the forms, take a few minutes of your time to accomplish this vital task.

Program of the Year

A South Carolina research project aimed at preventing childhood emotional disturbances was hailed as the psychiatric program of the year.

The first-place Gold Achievement Award of the American Psychiatric Association (APA) was awarded to the Sumter, S. C., Child Study Project.

Receiving the award at the opening session of the APA's annual Mental Hospital Institute in Minneapolis was Dr. William S. Hall, South Carolina commissioner of mental health, together with M. R. "Skip" Newton and Dr. Racine D. Brown, co-directors of the project.

The five-year study, now 90 per cent complete, was undertaken in 1963 by the South Carolina Department of Mental Health in cooperation with Sumter City Schools. The project was made possible by a grant from the National Institute of Mental Health.

SCMA News

The South Carolina Medical Association has been invited by Gov. Robert McNair to appoint a representative to serve on the Advisory Council for the Comprehensive Health Planning Program, created under the provisions of Public Law 89-749. Other associations represented on the state's council are the S. C. Hospital Association, S. C. Dental Association, S. C. Nurses' Association and the S. C. Pharmaceutical Association.

One by one the family's downed Because the G.I. bug's around

Parepectolin for quick relief of acute diarrhea
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Whether it's a 24-hour "bug", a food problem, or simply nervousness and anxiety, Parepectolin will bring the diarrhea under control until etiology can be determined. In some cases, Parepectolin may be all the therapy necessary.

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*Paregoric (equivalent) .... (1.0 dram) 3.7 ml.
Contains opium (¼ grain) 15 mg. per fluid ounce.
warning: may be habit forming
Pectin .... (2½ grains) 162 mg.
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Usual Adult Dose: One or two tablespoonfuls three times daily.
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February 8-9. 1968

Subjects will include:

- Renal Failure
- Bacterial Endocarditis
- ECG Interpretation
- Hypertension
- Coronary Artery Disease
- Anemias
- Multiple Myeloma
- Rheumatoid Arthritis and Lupus
- Gastrointestinal Bleeding
- Clues to Gastrointestinal Disease
- Diabetes Mellitus
- Radioisotopes in Diagnosis

Hospital News

Voters in Richland County approved a $14 million bond issue for a new Columbia Hospital by a two to one margin. The bond issue was an addition to a $6 million issue passed in 1964. The new hospital will be a 600-bed unit, comprising the first phase of a planned 1,200-bed hospital. The present Columbia Hospital will be converted to an extended care unit.

Vice President Hubert H. Humphrey took part in groundbreaking ceremonies for a new mental health unit at Greenville in September. The center will be the first phase of a proposed $40 million health complex being developed by Greenville General Hospital southwest of the city. The William George Sirrine Hospital was dedicated in September. Formerly the Greenville Maternity Shelter Hospital, the 41-bed Sirrine unit was extensively renovated and will be used as a chronic disease center.

A four-year residency program in surgery has been approved for Spartanburg General Hospital by the conference committee on Graduate Education in Surgery.

Two new federal hospitals are scheduled for construction in South Carolina in the near future. Construction of a 12-story, 444-bed general hospital will begin at Fort Jackson in July, and the contract for designing a new naval hospital for Charleston has been awarded to two achitectural firms in the state.

Share Your Journals

The doctors of the U. S. A. are being asked to send their medical journals—after they have read them—to colleagues overseas (Asia, Latin America and Africa) who wish to have access to current medical literature but, either because of currency regulations or actual cost involved, cannot themselves subscribe to medical periodicals. We can supply you with the name, address, and medical specialty of doctors in these areas who would be happy to receive these much wanted journals, (particularly specialty journals), which you may mail direct to your oversease colleague.

This is a direct "Doctor-to-Doctor" program which is being sponsored by the American Medical Association with the collaboration of The World Medical Association to help alleviate the lack of current medical publications and to further international good will. Your cooperation in this program will be greatly appreciated and your contact with these colleagues in other countries, we can assure you, will prove very gratifying. If you wish to participate in this program, send your name, address, and titles of journals you will contribute to Doctor-to-Doctor Program, Ada Chree Reid, M.D., director; c/o The World Medical Assn., Inc., 10 Columbus Circle, New York, N. Y. 10019.

Booklets Available

The disease that afflicts man more commonly than any other is the subject of a new booklet, "Osteoarthritis, A Handbook for Patients", issued recently by The Arthritis Foundation.

Single copies may be obtained at no charge from any of the 79 chapters of the foundation in major cities across the country, or by writing The Arthritis Foundation, Box 2525, New York, N. Y. 1001.

A new informational pamphlet, "Systemic Lupus Erythematosus," has just been published by the National Institute of Arthritis and Metabolic Diseases, National Institutes of Health, Public Health Service, Bethesda, Maryland, 20014.

Single copies may be obtained from the Public Health Service, Washington, D. C. 20201.

Speaker Service

Syntex Speaker Service of Syntex Laboratories, Inc., Palo Alto, Calif. 94304 offers a new speaker service to medical societies and public groups anywhere in the country. Now available in this area is a speaker on the subject of the threat of world starvation by reason of population explosion. The talk is entitled "Two's Company, Three Billion's a Crowd". Arrangements may be made through Syntex.

DEATHS

Dr. Charles Moore

Dr. Charles M. Moore of the Darlington Apartments, Charleston, died Sept. 26 in Wilmington, Del.

Dr. Moore was born in Stateburg June 3, 1893, a son of Screven Moore and Mrs. Harriott Pinckney Moore.

He was graduated from the College of Charleston and in 1924 from the Medical College of South Carolina. Dr. Moore was a member of Grace Protestant Episcopal Church.

Dr. William Edgar Crooks

Dr. William Edgar Crooks, a retired Naval physician, died Sept. 27.

Dr. Crooks was born Sept. 26, 1889 in Craven Hill. He was an Episcopalian, attended Newberry College and graduated from the Medical College of South Carolina in 1917. He had served as a physician in the U. S. Navy in various worldwide military hospitals.

Dr. M. Whitfield Cheatham

Dr. M. Whitfield Cheatham, 80, died Sept. 12 in Columbia.

He was born in Abbeville County and attended Presbyterian College and was graduated from the Medical College of South Carolina. Dr. Cheatham practiced medicine in McCormick and Columbia. He was a member of the Columbia Medical Society and the S. C. Medical Assn.

Treatment of Bacterial Endocarditis in Patients With Penicillin Hypersensitivity—G. R. Green, G. A. Peters, and J. E. Geraci **Ann Intern Med** 67:235-249 (Aug) 1967

A series of 400 cases of bacterial endocarditis was reviewed. Seventy-one (18%) gave a history of penicillin allergy. Fifty-six of these required penicillin therapy and 22 (39%) had an allergic reaction. In contrast, only 6% of those with no history of penicillin allergy had a reaction to penicillin therapy. There were no deaths from allergic reactions, and penicillin therapy was completed, with the aid of antihistamine and corticosteroid therapy, in all but 8 of 40 patients who had an allergic reaction. An adequately bactericidal regimen of non-penicillin antibiotics should be used if possible in any patient with bacterial endocarditis and a history of penicillin allergy, especially if the skin reaction to penicillin is positive. However, some patients with bacterial endocarditis and a history of penicillin allergy will still require penicillin therapy for survival. These should be given the drug cautiously and in full knowledge of the risk involved.

Pediatric Aspects of Early Discharge of Maternity Patients—M. W. Arthurton and F. N. Bamford **Brit Med J** 3:517-519 (Aug 26) 1967

In the years 1959 to 1965 a total of 9,718 babies were discharged from hospital within 72 hours of birth. An improvement in perinatal mortality is described and the mortality and morbidity experience of early discharge babies is compared to those born at home during the same period. The difference between the two groups was not statistically significant. Inquiry into breast feeding in the domiciliary, early-discharge, and long-stay hospital patients was recorded and showed that mothers confined in hospital begin to feed their babies and become established breast feeders more frequently.

Obstetric Aspects of the Early Discharge of Maternity Patients—G. A. Craig and J. M. B. Muirhead **Brit Med J** 3:520-511 (Aug 26) 1967

Case records of 5,000 consecutive patients who were discharged from hospital within 60 hours of delivery were analyzed. Experience showed that planned early discharge does not result in increased maternal morbidity nor does it add to the maternal risk. Modifications in the internal arrangements and staffing of the hospital are described. The scheme proved to be an efficient and economic way of ensuring that the maximum number of mothers and babies receive the benefit of hospital care at the time of their greatest need for it. An appreciable number of patients like and request early discharge. It is to be hoped that a more flexible approach to the management of the first ten days of the puerperium will become the accepted rule.

To be published by the
South Carolina Medical Association
in November

Volume 2

of

A History of Medicine
in South Carolina

By Joseph I. Waring, M.D.
covering the period 1825 to 1900.

This book is a continuation of the first volume, published in 1964, whose story ended at 1825. The preceding volume was well received by medical historians.

The second volume will soon be available.

For a limited period members of the South Carolina Medical Association are entitled to purchase this book at $3.25 postpaid. Orders may be placed now.

It's price on the market will be $7.75 postpaid.

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KENNETH AYCOCK, M.D.
State Health Officer

The new medical assistance program, TITLE XIX or MEDICAID, is considered by many to be an extension of the Kerr-Mills; however, it differs considerably in intent and extent. For a state to "buy into" the benefits available under Title XIX, the state must make the following five medical care services:

1. In-patient hospital service
2. Out-patient hospital service
3. Physician services (whether furnished in hospital, office, patient's home, nursing home, or elsewhere)
4. Skilled nursing home services for persons over age 21

5. Laboratory and X-Ray services available for public assistance groups of the following categories:

1. Old-age assistance
2. Aid to the blind
3. Aid to the permanently and totally disabled
4. Aid to families with dependent children

The five services listed to recipients of these four categories are considered to be a minimum service and must be in effect by 1970, or else the State will lose all federal matching funds to persons within these categories. By 1975 the State must provide comprehensive medical care to all medically indigent (as determined by the State) persons.

Title XIX permits broad coverage of a State's program of medical assistance. To quote from the policies and guidelines set forth for the administration of the law, "The passage of Title XIX marks the beginning of a new era in medical care for low income families. The potential of this new title can probably not be over-estimated, as its ultimate goal is assurance of complete, continuous, family-centered medical care of high quality to persons who are unable to pay for it themselves. The law aims much higher than the mere paying of medical bills, and the states, in order to achieve its high purpose, will need to assume responsibiliy for planning and establishing systems of high quality medical care, comprehensive in scope, and wide in coverage."

The implementation of Title XIX or Medicaid carries with it the possibility for changing the entire pattern of medical care as it now exists. On the other hand, Title XIX offers the greatest opportunity now available for this State to provide the much needed medical services to the many persons in need of such care but who are now denied that care because of a lack of financial means.

Projections of a recent financial survey to support implementation of Title XIX prepared for the South Carolina Department of Public Welfare estimated a population of 1,500,000 medically indigent in South Carolina (based on the 1960 census and an annual family income of less than $3,000) who would be eligible for benefits under Title XIX by 1975. Current impressions gained from the State Department of Public Welfare indicate that plans are being made to implement a Title XIX program for South Carolina which will provide the following benefits: In-patient hospital care, out-patient care, skilled nursing home services, physician services, dentistry of a limited nature, and prescription drugs to the following estimated numbers of persons by categories: 26,668 dependent children, 2,121 blind, 10,588 totally and permanently disabled, and 1,345 foster care children. The total annual cost of such a program is estimated at $15,799,478, with the State's share of 19.1% being $3,107,704.

It is quite clear to those who are familiar with Title XIX that there is considerable range among possible programs in three dimensions, namely (a) numbers and categories of people to be included, (b) scope of benefits, and (c) coverage of a time span increasing and expansion of benefits up to 1975.

The key to success in Title XIX lies in the planning for services for recipients of Medicaid, and such planning to be a success must include planning with and for the physicians who are to render the services.

At the present, responsibility for the planning and implementation of Title XIX or Medicaid rests with the South Carolina Department of Public Welfare. They have expressed their willingness to cooperate with the physicians and the South Carolina State Board of Health in planning for the services to be administered under Title XIX. However, as of now there is no concrete evidence to support this statement. An expression of the scope of services to be offered under Title XIX and how these services are to be provided has already been presented by the South Carolina Department of Public Welfare as expressed in the State-wide Liaison Committee meetings on Title XIX, which were held on April 2, 1967, and August 30, 1967.

A large part of the future of the practice of medicine in South Carolina will be set forth in the Plan For The Implementation Of Title XIX, to be drawn up and presented to the Department of Health, Education, and Welfare by the South Carolina Department of Public Welfare. How active a part will you play in deciding how you will practice your profession (regarding scope of services, how services are to be provided, standards of medical care, etc.)? The future belongs to those who plan for it.

"I conceive that words are like money, not the worse for being common, but it is the stamp of custom alone that gives them circulation or value. I am fastidious in this respect, and would almost as soon coin the currency of the realm as counterfeit the King's English." William Hazlett.

O "facility"! O "presently"! O "and/or" et alia!

New Pharmaceutical Specialties

by Paul De Haen

For detailed information regarding indications, dosage, contraindications and adverse reactions, refer to the manufacturer's package insert or brochure.

Single Chemicals—Drugs not previously known, including new salts.

Duplicate Single Products—Drugs marketed by more than one manufacturer.

Combination Products—Drugs consisting of two or more active ingredients.

New Dosage Forms—Of a previously introduced product.

DUPLICATE SINGLE PRODUCTS

PROSERUM 25—Hospital Solution Rx

Manufacturer: Pitman-Moore

Nonproprietary Name: Normal Serum Albumin (Human), Salt-poor, USP

Indications: Replacement therapy in hypoproteinemic states, hypovolemic shock, and to promote diuresis in cases of edema due to chronic renal disease and hepatic cirrhosis.

Contraindications: None mentioned.

Dosage: I.V., diluted or undiluted, amount depending on diagnosis.

Supplied: Vials—25% sol.; 20 and 50 ml.

ANESTACON—Anesthetic—Local and Topical Rx

Manufacturer: Conal Pharmaceuticals

Nonproprietary Name: Lidocaine HC1

Indications: For rapid anesthesia of urethral mucosa prior to urethroscopy, cystoscopy, urethral dilation and catheterization.

Contraindications: History of allergy to lidocaine HC1.

Dosage: Males—5 to 15 ml instilled into urethra. Females—1 ml instilled into urethra.

Supplied: Sterile solution—2%; 240 ml containers and 15 ml disposable units.

COMBINATION PRODUCTS

RACET LCD CREAM

Dermatologic Prep.—Other Rx

Manufacturer: Lemmon Pharmacal Co.

Composition:

Iodochlorhydroxyquin	3%
Hydrocortisone	0.5%
Coal Tar Solution	5%

Indications: Eczematous conditions, and for control of inflammation and pruritus.

Contraindications: Not for use in the eye or in the presence of tuberculosis, vaccinia, varicella or other viral skin conditions. Avoid exposure of treated areas to sunlight.

Dosage: Apply 3 or 4 times daily.

Supplied:
Tubes—30 Gm.; boxes of 12.
Jars—454 Gm.

RAUZIDE

Hypotensive. Rx

Manufacturer: E. R. Squibb & Sons

Composition: Each tablet contains:

Rauwolfia serpentina	50 mg.
Bendroflumethiazide	4 mg.

Indications: Essential hypertension, in those patients not benefited by rauwolfia alone; patients who show signs of congestive failure and edema; in cases where an immediate lowering of blood pressure is essential.

Contraindications: Hypersensitivity to any of its components; severe renal or hepatic disease.

Dosage: Initial—1 to 4 tablets daily at mealtime. Maintenance—1 or 2 tablets daily at mealtime may range up to 4 tablets.

Supplied: Tablets—bottles of 100.

COMBINATION PRODUCTS

C-RON FA

Hematinics/Vitamins Comb. Rx

Manufacturer: Rowell Laboratories

Composition:

Ferrous fumarate	200 mg.
Ascorbic Acid	600 mg.
Folic Acid	0.5 mg.

Indications: Iron-deficiency and megaloblastic anemias of pregnancy.

Contraindications: None mentioned.

Dosage: 1 to 3 tablets daily.

Supplied: Tablets—bottles of 100 and 1000.

NEW DOSAGE FORMS

MEDROL ENPAK

Hormones—Corticoids. Rx

Manufacturer: The Upjohn Company

Nonproprietary Name: Methylprednisolone acetate

Indications: Rectal instillation for local effect as adjunctive therapy of ulcerative colitis.

Contraindications: Herpes simplex keratitis; acute psychoses; latent questionably healed or active tuberculosis; peptic ulcer; Cushing's syndrome; diverticulitis; fresh intestinal anastomoses; osteoporosis; renal insufficiency; thromboembolic tendencies; chronic psychotic reactions; diabetes mellitus; hypertension; local or systemic infections including vaccinia and varicella as well as fungal and other exanthematous disease; pregnancy.

Dosage: 40 mg administered as retention enema or by continuous drip 3 to 7 times weekly for periods of 2 or more weeks.

Supplied: Liquid—40 mg; boxes of 6 to 12 bottles.

NEW SINGLE CHEMICALS

CHOLOXIN

Cholesterol-reducing Agent. Rx.

Manufacturer: Flint Laboratories

Nonproprietary Name: Sodium dextrothyroxine

Indications: Hypercholesterolemia in euthyroid patients with no evidence of heart disease, and hypertension in patients with cardiac disease who cannot tolerate other types of thyroid medication.

Contraindications: Heart disease, hypertension (other than mild, labile hypertension), advanced liver or kidney disease, during pregnancy and lactation, history of iodism.

Dosage: Adults—initial: 1 to 2 mg daily, to be increased at intervals not less than one month if necessary.

Maintenance: 4 to 8 mg daily.

Children—initial: 0.05 mg/Kg. daily to be increased at monthly intervals if necesary.

maintenance: 0.1 mg/Kg. daily, maximum 4 mg daily.

Supplied: Tablets—2 and 4 mg; bottles of 30.

PROLIXIN ENANTHATE

Ataraxic Rx

Manufacturer: E. R. Squibb & Sons, Inc.

Nonproprietary Name: Fluphenazine enanthate

Indications: Management of schizophrenia and other psychotic disorders including mania and brain disease.

Contraindications: Suspected or established subcortical brain damage, with or without hypothalamic damage; patients receiving large doses of hypnotics or with a history of convulsive disorders; mitral insufficiency or pheochromocytoma; idiosyncrasy to other centrally acting drugs; comatose or severely depressed states; blood dyscrasia, liver damage or renal insufficiency. Not for children under 12 years.

Dosage: 25 mg i.m. or s.c. every 2 weeks. Dosage should be adjusted individually.

Supplied: Multiple dose vials—5 ml (25 mg/ml)

NEW DOSAGE FORMS

HALDOL

Ataraxic Rx

Manufacturer: McNeil Laboratories

Nonproprietary Name: Halcoperidol

Indications: Schizophrenia, manic phases of affective reactions, psychotic reactions in adults with organic brain damage and mental deficiency, and Gilles de la Tourette's syndrome.

Contraindications: In comatose patients, those severely depressed by alcohol or other centrally acting agents, parkinsonism, and children under 12 years.

Dosage: Initial—1 to 2 mg, 2 or 3 times daily. Maintenance—1 to 2 mg, 3 or 4 times daily. Maximum: 2 to 5 mg, 2 or 3 times daily.

Supplied: Oral solution—2 mg/ml; bottles of 15 ml.

Supplied: Tablets—0.5, 1, and 2 mg; bottles of 100 and 1000.

MILTOWN, INTRAMUSCULAR

Ataraxic Rx

Manufacturer: Wallace Laboratories

Nonproprietary Name: Meprobamate

Indications: Adjunct in the treatment of tetanus.

Contraindications: Allergic or idiosyncratic reactions to meprobamate, impaired renal function. Not for intravenous use.

Dosage: Must be individualized Adults—400 mg q. 3-4 h. Infants—125 mg q. 6 h.

Supplied: Ampuls—400 mg/5 ml

Book Reviews

LEARNING MEDICAL TERMINOLOGY STEP BY STEP. Clara G. Young and James D. Barger. C. V. Mosby Company, St. Louis, Mo. 1967. Pp. 327. $7.50.

Intended as a reference book for those people who assist the doctor in his manipulation of medical terms, this book offers a very useful tool for the nonmedical reader or writer. The medical secretary can gain a great deal of help from it and can pursue comfortably her basic education in the matter of derivation of words, which persuit should give a much warmer feeling for their meanings.

The contents include a brief survey of the sciences included in the study of medicine, a brief consideration of the various systems of the body, a sort of instant anotomical text. Laboratory tests are elucidated, abbreviations and symbols are listed (some of these latter might be a dealers choice) and something is said about medical insurance claims and methods of conquering insurance forms and hospital records.

This is a book which should do much to assist the assistant.

JIW

RADIOLOGY IN WORLD WAR II—Published by the Office of the Surgeon General, Department of the Army, Washington, D. C., 1966. For sale by the Superintendent of Documents; U. S. Government Printing Office, Washington, D. C. $8.25.

This Volume consists of 921 pages, liberally illustrated and well indexed. It covers every phase of radiology in World War II. In some sections it is excessively detailed.

The book was written by 31 authors, all of whom were radiologists in active service during the war. Each has described the problems he encountered and attempted to solve.

It begins with a review of the status of radiology in the Medical Service at the beginning of the war and records the development of training programs designed to supply technicians and radiology officers (not exactly radiologists) to fill the enormous void.

There is a section devoted to each of the theaters of the war. Difficulties arising from failure of supply and adverse working conditions are recounted. Improvisation was the prevailing duty of the radiology personnel and the experiences are interesting to read about, and to recall.

This is an historical book, and should have been written. But its raison d'etre was to serve as a guide for radiologists and administrators in future wars. It is not likely to be of significant value in this regard.

Radiologists who served in World War II will find the book entertaining, but I doubt that the new generation will devote many minutes to its reading or study.

H. S. Pettit, M.D.

It is understood that the surgeon now practicing in Barnwell plans to relocate very soon. The physicians and citizens of Barnwell would like very much to find a surgeon to replace the present incumbent.

Inquires may be directed to The Editor, Journal of the South Carolina Medical Association, 80 Barre St., Charleston, S. C. 29401.

Classified Advertisement

PSYCHIATRIC RESIDENCIES FOR G.P.'s. NIMH residency training in approved three year program. Stipend $11,500 to $12,000. Applicants must have completed four years or more of practice in field of medicine other than psychiatry after an approved internship. Applicants should not be over 45. Address inquiries to Chairman, Department of Psychiatry, Medical College of Virginia, Richmond, Virginia 23219. Include curriculum vitae and recent photograph.

Dulcolax®

bisacodyl

Few drugs work as predictably as Dulcolax. You can expect that when your office patient takes Dulcolax at home, it will be as effective as you said it would be. Your patient will be gratified, too.

The reliability of Dulcolax stems from its unique mode of action. The drug works directly on nerve endings in the colonic mucosa, producing normal peristalsis throughout the large intestine. It does not rely on systemic absorption for its effect.

This reliable action provides prompt relief of constipation. It also makes Dulcolax particularly useful for prepping the bowel for special procedures. In short, it makes Dulcolax ideal for your office practice.

Dulcolax acts so surely that the time of evacuation can often be closely predicted. Dulcolax tablets taken at night almost invariably result in a bowel movement soon after waking the following morning. Dulcolax suppositories generally work in 15 to 20 minutes, almost always within the hour.

General Dosage Information: *Adults:* When an ordinary laxative effect is desired, 1 to 3 tablets or 1 suppository usually suffices. Tablets must be swallowed whole, not chewed or crushed, and should not be taken within one hour of antacids or milk. *Children:* 1 or 2 tablets, depending on age and severity of condition. Tablets must not be given to a child too young to swallow them whole. For infants and children under 2 years of age, half a suppository is usually effective. Above this age a whole suppository is usually advisable. Side Effects: As with any laxative, abdominal cramps are occasionally noted, particularly in severely constipated persons. High dosage may result in loose, unformed stools. Contraindication: Contraindicated only in acute surgical abdomen. Availability: Tablets (5 mg.) and suppositories (10 mg.). By prescription or recommendation.

Under license from Boehringer Ingelheim G.m.b.H.

Geigy Pharmaceuticals
Division of Geigy Chemical Corporation, Ardsley, N.Y.

"Yes, Doctor, the pain is gone."

'EMPIRIN'® COMPOUND with CODEINE PHOSPHATE gr. 1/2 No. 3

Each tablet contains: Codeine Phosphate gr. ½ (Warning – May be habit forming), Phenacetin gr. 2½, Aspirin gr. 3½, Caffeine gr. ½.

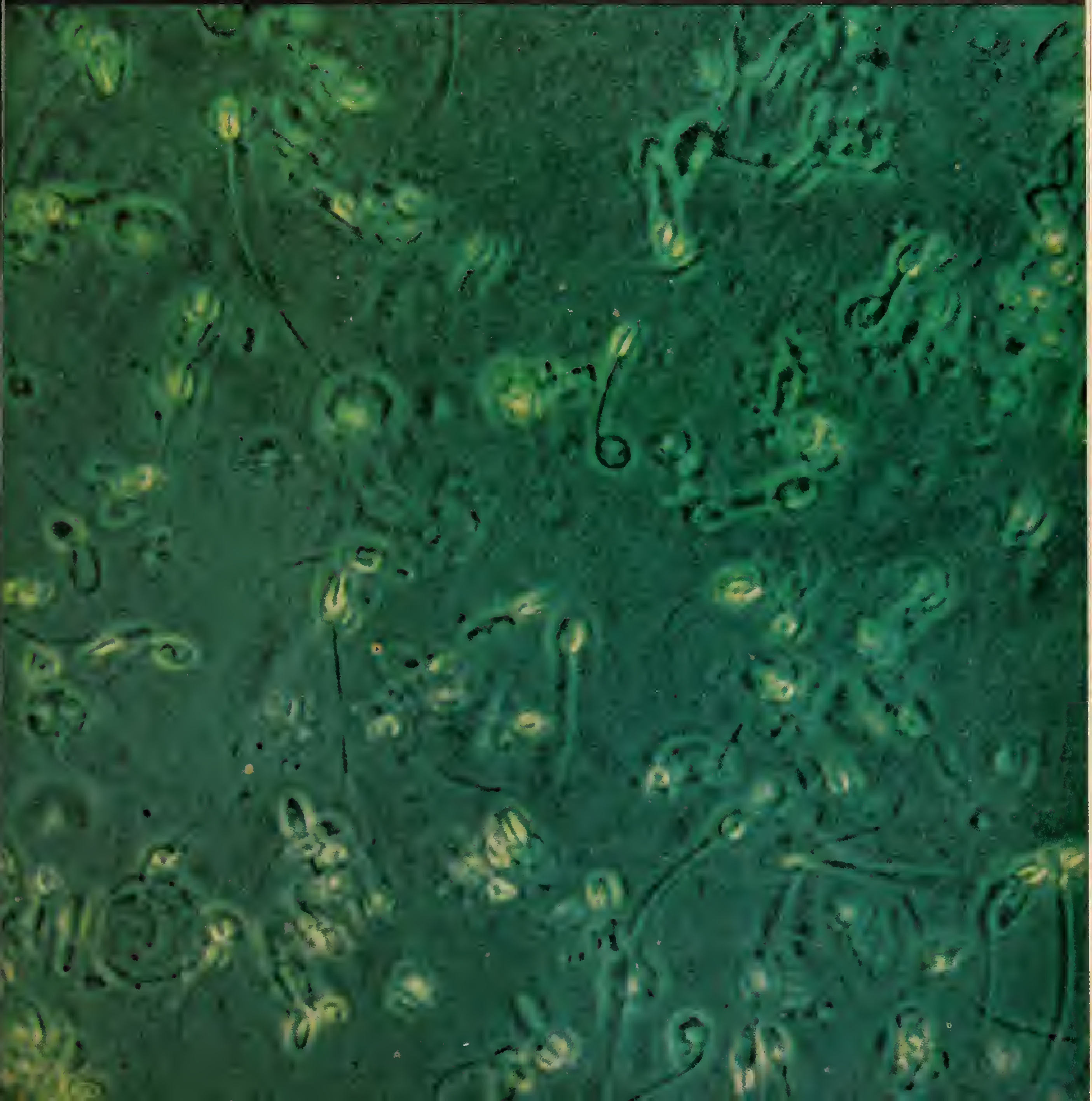
■ Despite introduction of synthetic substitutes, efficacy of 'Empirin' Compound with Codeine remains unchallenged.

BURROUGHS WELLCOME & CO. (U.S.A.) INC., Tuckahoe, N.Y.

When the talk turns to oral contraceptives, it makes medical sense to remember low-dose Norinyl®-1.

*(norethindrone 1mg. $\bar{c}$ mestranol 0.05mg.)

Turn page for contraindications, precautions and side effects.



Reduction of oral contraceptive dosage to the lowest effective levels is a well-accepted principle of conservative medical practice. In keeping with this view, Norinyl is now also available as Norinyl-1, containing exactly one half the previous dosage of norethindrone and mestranol. Clinical experience has established that effective fertility control can be achieved with the same degree of reliability and safety with new Norinyl-1 when taken as directed.

What about switching patients from higher dosage forms?

In transferring patients to low-dose Norinyl-1 from higher-dosage oral contraceptives, some breakthrough bleeding may occur in the early cycles. In the majority of cases the bleeding episode is mild and self-limited. The long-term advantages of the lower dosage form should be weighed against the inconvenience of possible breakthrough bleeding in the individual patient.

Prescribing Information

Contraindications: Patients with any symptoms or history of thrombophlebitis, pulmonary embolism, liver dysfunction or disease, carcinoma of breast or genital organs, or undiagnosed vaginal bleeding.

Warnings: Discontinue medication pending examination if there is sudden partial or complete loss of vision, proptosis, diplopia or migraine. If examination reveals papilledema or retinal vascular lesions, medication should be withdrawn. The safety of Norinyl-1 in pregnancy has not been demonstrated. If a patient misses two consecutive periods, pregnancy should be ruled out before continuing the medication. If she has not adhered to the prescribed schedule, pregnancy should be considered at the first missed period. Active ingredients of oral contraceptives have been detected in the milk of mothers who received these drugs; the significance to infants has not been determined.

Precautions: Pretreatment physical should include examination of the breasts and pelvic organs, as well as a Papanicolaou smear. If endocrine or liver function tests are abnormal during therapy, repeat tests are recommended after the drug has been withdrawn for two months. Following administration of drug, preexisting uterine fibromyomata may increase in size. Careful observation and caution are required for patients with symptoms or history of epilepsy, migraine, asthma, cardiac or renal dysfunction, cerebrovascular accident, psychic depression, and diabetes. In cases of undiagnosed vaginal bleeding, adequate diagnostic measures are indicated. Possible long-term effects of the drug on pituitary, ovarian, adrenal, hepatic or uterine function must await further studies. The physician should be alert to the earliest manifestations of thrombophlebitis and pulmonary embolism. The drug should be used judiciously in those young patients in whom bone growth is not complete. The age of the patient constitutes no absolute limiting factor, although treatment with Norinyl-1 may mask symptoms of the climacteric. The pathologist should be advised of Norinyl-1 therapy when relevant specimens are submitted.

Side Effects: The following have been observed with varying incidenc in patients receiving oral contraceptives: nausea, vomiting, gastrointestinal symptoms, breakthrough bleeding, spotting, change in menstrual flow, amenorrhea, edema, chloasma or melasma, breast changes (tenderness, enlargement and secretion), change in weight (increase or decrease), changes in cervical erosion and cervical secretions, suppression of lactation when given immediately postpartum, cholestatic jaundice, migraine, rash (allergic), rise in blood pressure in susceptible individuals, mental depression. Although the following side effects have been reported in users of oral contraceptives, no cause and effect relationship has been established: anovulation posttreatment, premenstruallike syndrome, changes in libido, changes in appetite, cystitis-like syndrome, headache, nervousness, dizziness, fatigue, backache, hirsutism, loss of scalp hair, erythema multiforme, erythema nodosum, hemorrhagic eruption, an itching. The following occurrences have been observed in users of oral contraceptives (a cause and effect relationship has neither been established nor disproved): thrombophlebitis, pulmonary embolism, neuroocular lesions.

The following laboratory tests may be altered by the use of oral contraceptives: increased sulfobromophthalein and other hepatic function tests, coagulation tests (increase in prothrombin, factors VII, VIII, IX and X), thyroid function (increase in PBI and butanol extractable protein-bound iodine and decrease in T^3 values), metyrapone test, pregnanediol determination.

norethindrone — an original steroid from

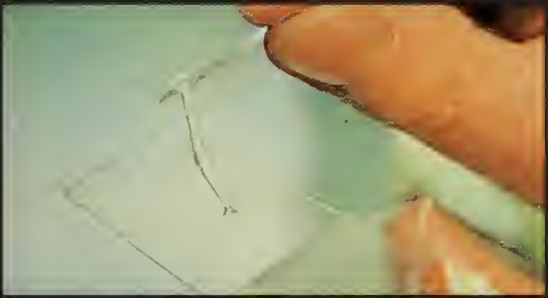
SYNTEX

LABORATORIES INC., PALO ALTO, CALIF.

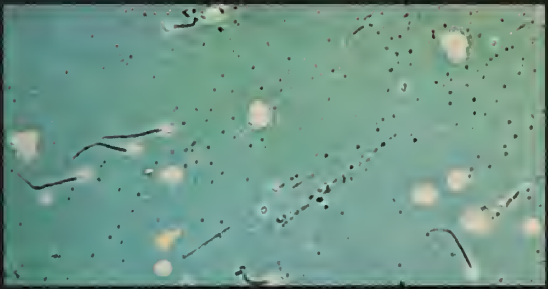
Here's why Norinyl-1 makes medical sense.

The effectiveness of Norinyl-1 as a low-dose oral contraceptive may be explained by its possible multiple action. In addition to its primary action of suppression of ovulation, Norinyl-1 may offer additional protective mechanisms... (1) creation of a cervical mucus that may be hostile to sperm penetration, and (2) development of an endometrium that may be out of phase with nidation. These effects are illustrated below.

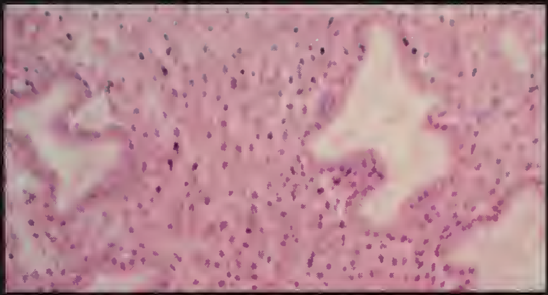
Untreated Patient



Cervical mucus at midcycle is usually thin and watery, with Spinnbarkeit (stretchability) of 15 to 20 cm.

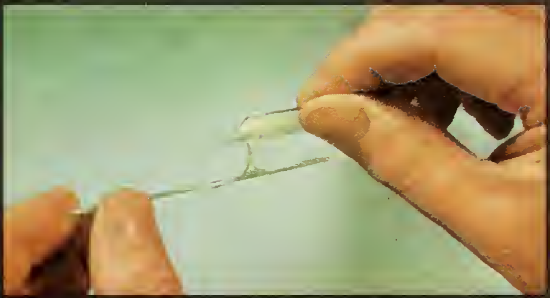


Spermatozoa appear healthy, active, freemoving.

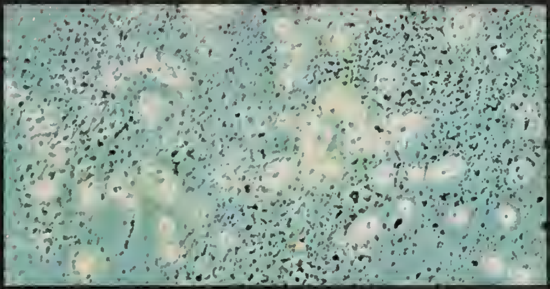


Endometrium of untreated patient is receptive to the fertilized ovum during secretory phase.

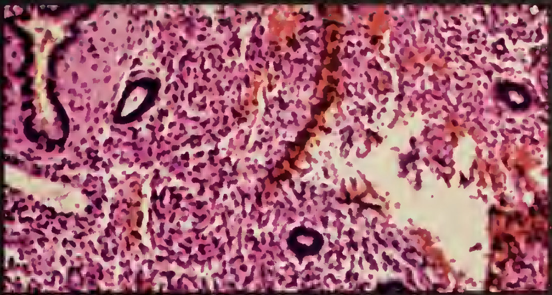
Norinyl-1 Patient



Cervical mucus at midcycle is scanty, viscous—with Spinnbarkeit of 1 cm. or less.



Immobile spermatozoa as they appear in cervical mucus taken from patient treated with Norinyl-1.



Norethindrone in Norinyl-1 accelerates secretory phase, suppresses glandular and vascular development.

Norinyl®-1
(norethindrone 1mg. c̄ mestranol 0.05mg.) tablets

- new low dose of time-proved ingredients
- established norethindrone/mestranol ratio
- lower patient cost

An uncommon steroid for common inflammatory dermatoses

In everyday topical steroid therapy, Synalar produces rapid resolution of inflammation and itching in steroid-responsive dermatoses—and at relatively low cost to the patient.

Advanced molecular design enhances potency

Synalar combines the advantage of earlier corticosteroid compounds with unique structural innovations. As a result, preparations of Synalar 0.01% and Synalar 0.025% have been reported to be more potent topically and significantly more effective than hydrocortisone 1.0%. The unique fluocinolone acetonide molecule provides one of the most useful topical corticosteroids for everyday practice.

Impressive clinical results in a wide range of dermatologic problems

The clinical efficacy of Synalar has been extensively documented in the world literature. Commonly encountered diseases such as allergic and contact dermatitis, eczematous and seborrheic dermatitis, and neurodermatitis respond rapidly to Synalar, often where previous therapy with other topical corticosteroids has failed.

Low patient cost for wider usefulness

With Synalar, a high degree of efficacy does not mean high price. And—a small quantity goes a long way. Thus, your patients can often obtain the "economy" of a hydrocortisone preparation with the proved efficacy of a potent, truly advanced steroid.

Synalar®
fluocinolone acetonide

Turn page for contraindications, precautions and side effects

For everyday topical steroid therapy
Synalar® 0.01%
fluocinolone acetonide
provides economy in two practical dosage forms

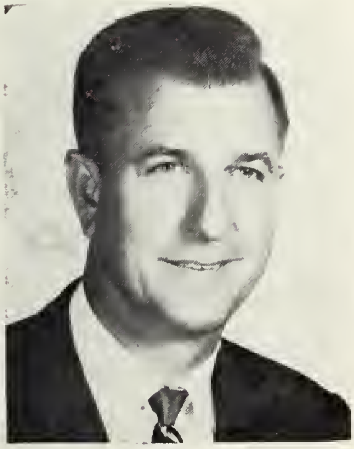
For general use, the most economical and widely applicable concentration of Synalar is 0.01% Cream in a water-washable, vanishing cream base. Synalar Solution 0.01% is especially valuable in dermatoses involving moist, intertriginous areas or hairy sites where creams and ointments do not spread or penetrate readily. Synalar Solution is a unique dosage form—clear, nongreasy, cosmetically elegant.

Product Information

Contraindications: Tuberculous, fungal, and most viral lesions of the skin (including herpes simplex, vaccinia, and varicella). Not for ophthalmic use. Contraindicated in individuals with a history of hypersensitivity to any of the components. *Precautions:* Synalar preparations are virtually nonsensitizing and nonirritating. However, the solution may produce burning or stinging when applied to denuded or fissured areas. In some patients with dry lesions, the solution may increase dryness, scaling or itching. Where severe local infection or systemic infection exists, the use of systemic antibiotics should be considered, based on susceptibility testing. While topical steroids have not been reported to have an adverse effect on pregnancy, the safety of their use on pregnant females has not absolutely been established. Therefore, they should not be used extensively on pregnant patients, in large amounts, or for prolonged periods of time. *Side Effects:* Side effects are uncommon with topical corticosteroids. As with all drugs, however, a few patients may react unfavorably to Synalar under certain conditions. In such cases the agent should be discontinued and appropriate measures taken. *Availability:* Synalar (fluocinolone acetonide) Cream 0.025%—5, 15 and 60 Gm. tubes and 425 Gm. jars. Cream 0.01%—15, 45 and 60 Gm. tubes and 120 Gm. jars. Solution 0.01%—20 and 60 cc. plastic squeeze bottles. Ointment 0.025%—15 and 60 Gm. tubes. Neo-Synalar® (neomycin sulfate 0.5% [0.35% neomycin base], fluocinolone acetonide 0.025%) Cream—5, 15 and 60 Gm. tubes.

fluocinolone acetonide — an original steroid from
SYNTEX
LABORATORIES INC., PALO ALTO, CALIF.

In South Carolina . . .
These Syntex men serve the physician



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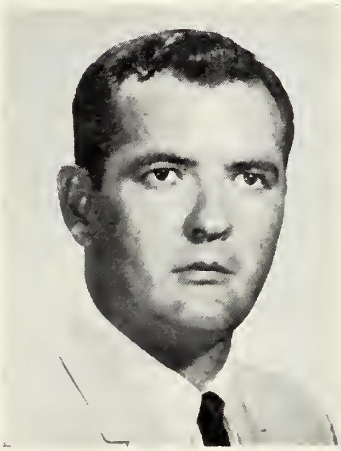
Jacksonville, Florida
721-0905



JAMES McKINNON
Charlotte, North Carolina
525-3217

ROY MUSE
Charlotte, North Carolina
525-2703

SYNTEX
LABORATORIES INC., PALO ALTO, CALIF.

when he just can't sleep

Tuinal®

One-Half Sodium Amobarbital and
One-Half Sodium Secobarbital
supplied in ¾, 1½, and 3-grain Pulvules®

Tuinal helps wakeful patients fall asleep fast, stay asleep all night.

Indications: Tuinal is indicated for prompt and moderately long-acting hypnosis. It is not suitable for continuous daytime sedation.

Contraindications: Barbiturates should not be administered to anyone with a history of porphyria, nor should they be given in the presence of uncontrolled pain, because excitement may result.

Warning: May be habit-forming.

Precautions: Tuinal should be used cautiously in patients with decreased liver function, since prolongation of effect may occur.

Adverse Reactions: Idiosyncrasy, such as excitement, hangover, or pain, may appear. Hypersensitivity reactions occur in some patients, especially in those with asthma, urticaria, or angioneurotic edema.

Overdosage: C.N.S. depression. Symptoms—Depression of respiration and of superficial and deep reflexes, slight constriction of the pupils (in severe poisoning, dilation), decreased urine formation, lowered body temperature, coma. Treatment—Symptomatic and supportive (gastric lavage; intravenous fluids; maintenance of blood pressure, body temperature, and adequate respiration). Dialysis may speed removal of barbiturates from body fluids.

Dosage: 50-200 mg. (¾-3 grains) at bedtime.

[031767]

Additional information available to physicians upon request.
Eli Lilly and Company • Indianapolis, Indiana 46206

Lilly

700955

LACTINEX®

TABLETS & GRANULES

- **to help restore and stabilize the intestinal flora**
- **for fever blisters and canker sores of herpetic origin**

LACTINEX contains both *Lactobacillus acidophilus* and *L. bulgaricus* in a standardized viable culture, with the naturally occurring metabolic products produced by these organisms.

First introduced to help restore the flora of the intestinal tract in infants and adults,[1, 2, 3, 4] LACTINEX has also been shown to be useful in the treatment of fever blisters and canker sores of herpetic origin.[5, 6, 7, 8]

No untoward side effects have been reported to date.

Literature on indications and dosage available on request.

References:

(1) Siver, R. H.: CMD, *21*:109, September 1954. (2) Frykman, H. H.: Minn. Med., *38*:19-27, January 1955. (3) McGivney, J.: Tex. State Jour. Med., *51*:16-18, January 1955. (4) Quehl, T. M.: Jour. of Florida Acad. Gen. Prac., *15*:15-16, October 1965. (5) Weekes, D. J.: N.Y. State Jour. Med., *58*:2672-2673, August 1958. (6) Weekes, D. J.: EENT Digest, *25*:47-59, December 1963. (7) Abbott, P. L.: Jour. Oral Surg., Anes., & Hosp. Dental Serv., 310-312, July 1961. (8) Rapoport, L. and Levine, W. I.: Oral Surg., Oral Med. & Oral Path., *20*:591-593, November 1965.

HYNSON, WESTCOTT & DUNNING, INC.

HWD BALTIMORE, MARYLAND 21201

(LX04)

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Let's be specific about Campbell's Soups...
and *reducing diets*

There are more than 30 million people in America who are overweight. During the next year, you probably will see more than 1,000 of them in your own practice.

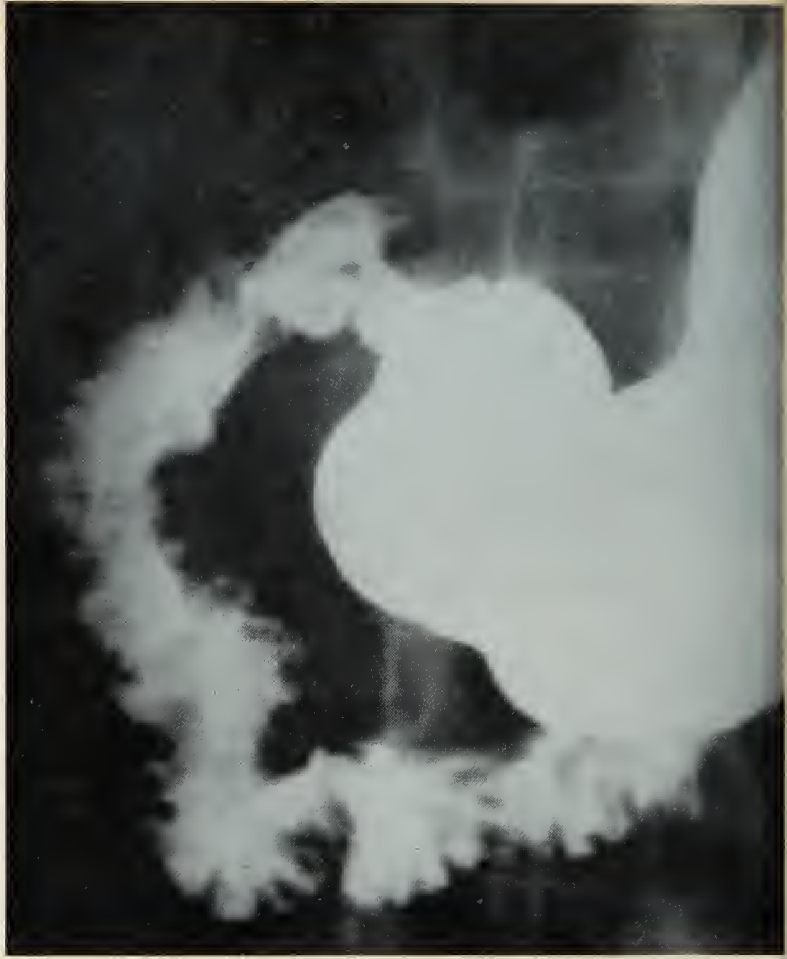
One good way to help these patients is to give them a reducing diet based on ordinary eating patterns.

Campbell has prepared a sensible plan for weight control based on ordinary eating patterns. The plan consists of a patient instruction booklet and a set of menus which provide approximately 1,200 calories daily. The menus are balanced to provide the minimum daily requirements of nutrients.

To obtain a supply for your office write to:
Campbell Soup Company, Box 265, Camden, N.J. 08101

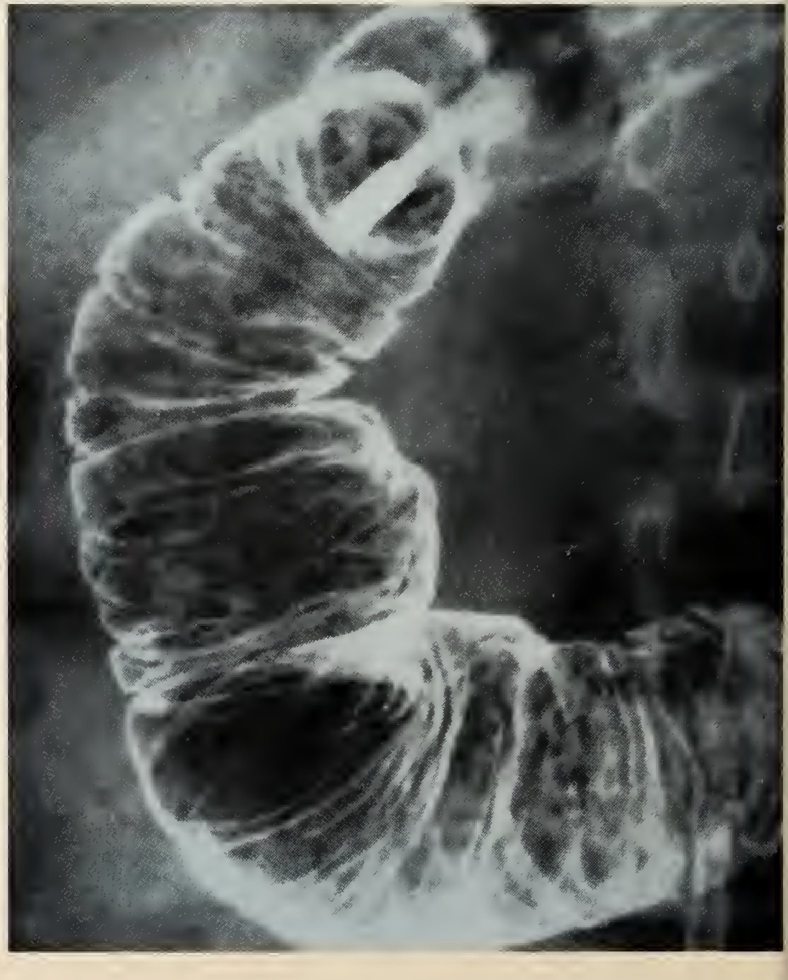
Conventional Radiography

The restless duodenum makes radiographic diagnosis difficult, uncertain and often unproductive: Is this duodenum abnormal?



Hypotonic Duodenography

Pro-Banthīne-induced duodenal calm permits full anatomic appraisal: Same patient. Duodenal normality is now evident.



- **in diagnosis**
- **in treatment**

Pro-Banthīne® brand of propantheline bromide

calms the gastrointestinal tract

For fifteen years Pro-Banthīne has been the most widely used anticholinergic agent in disorders of gastrointestinal motility and gastric hypersecretion. More recently Pro-Banthīne has reestablished its pharmacologic effectiveness in diagnostic procedures using intragastric fibroscopy and hypotonic roentgenography.

How the X-rays were taken

In the hypotonic duodenograph[1,2] reproduced above, the gastrointestinal tract was relaxed with Pro-Banthīne. The duodenum was intubated. Pro-Banthīne in a dose of 60 mg. intramuscularly was used to assure prompt aperistalsis and double-contrast visualization was achieved with ordinary barium and air.

The same pharmacologic efficiency has proved of pronounced value in such conditions as: *peptic ulcer, pylorospasm, biliary dyskinesia, functional hypermotility and irritable colon.*

Contraindications: Glaucoma or severe cardiac disease.

Precautions: Since varying degrees of urinary hesitancy may occur in elderly males with prostatic hypertrophy, this should be watched for in such patients until they have gained some experience with the drug. Although never reported, theoretically a curare-like action may occur with possible loss of voluntary muscle control. Such patients should receive prompt and continuing artificial respiration until the drug effect has been exhausted.

Side Effects: The more common side effects, in order of incidence, are xerostomia, mydriasis, hesitancy of urination and gastric fullness.

Dosage: The maximal tolerated dosage is usually the most effective. For most *adult* patients this will be four to six 15-mg. tablets daily in divided doses. In severe conditions as many as two tablets four to six times daily may be required. Pro-Banthīne (brand of propantheline bromide) is supplied as tablets of 15 mg., as prolonged-acting tablets of 30 mg. and, for parenteral use, as serum-type vials of 30 mg. The parenteral dose should be adjusted to the patient's requirement and may be up to 30 mg. or more every six hours, intramuscularly or intravenously.

(1) Bilbao, M. K.; Frische, L. H.; Rösch, J., and Dotter, C. T.: Hypotonic Duodenography, Scientific Exhibit, Radiological Society of North America, Chicago, Nov. 27–Dec. 2, 1966.

(2) Bilbao, M. K.; Frische, L. H.; Dotter, C. T., and Rösch, J.: Hypotonic Duodenography, Radiology, in press.

SEARLE

Preludin® phenmetrazine hydrochloride

For complete details,
please see full
Prescribing Information.

helps keep calories at arm's length

Preludin is indicated only as an anorectic agent in the treatment of obesity. It may be used in simple obesity and in obesity complicated by diabetes, moderate hypertension, or pregnancy. For use in pregnancy, see Warning.

Dosage: One 25 mg. tablet b.i.d. or t.i.d. Or one 75 mg. Endurets® prolonged-action tablet a day, taken by midmorning.
Contraindications: Severe coronary artery disease, hyperthyroidism, severe hypertension, nervous instability, and agitated prepsychotic states. Do not use with other CNS stimulants, including MAO inhibitors.

Warning: Do not use during first trimester of pregnancy unless potential benefits outweigh possible risks. There have been clinical reports of congenital malformation, but causal relationship has not been proved. Animal teratogenic studies have been inconclusive.
Precautions: Use with caution in moderate hypertension and cardiac decompensation. Cases involving abuse of or dependence on phenmetrazine hydrochloride have been reported. In general, these cases were characterized by excessive consumption of the drug for its central stimulant effect, and have resulted in a psychotic illness manifested by restlessness, mood or behavior changes, hallucinations, or delusions. Do not exceed recommended dosage.
Side Effects: Dryness or unpleasant taste in the mouth, urticaria, overstimulation, insomnia, urinary frequency or nocturia, dizziness, nausea, or headache. (B)R46-560-A

Geigy Pharmaceuticals, Division of
Geigy Chemical Corporation, Ardsley, N.Y.

Under license from
Boehringer Ingelheim G.m.b.H.

Against these three major pathogens…

Pneumococci
Penicillin-Sensitive Staphylococci
Beta-Hemolytic Streptococci

V-Cillin K® provides dependable oral antibacterial therapy

because it combines a high degree of activity...

V-Cillin K has been shown to be effective in the treatment of streptococcus and pneumococcus infections as well as infections caused by sensitive strains of staphylococci. It may be used for the prophylaxis of streptococcus infections in patients with a history of rheumatic fever and for the prevention of bacterial endocarditis after tonsillectomy in patients with a history of rheumatic fever or congenital heart disease.

with high blood levels, even when taken with food

V-Cillin K is stable in acid and immediately soluble. High serum levels, therefore, are reached rapidly. Because it is acid stable, V-Cillin K is well absorbed even when taken close to mealtime. These desirable properties help make V-Cillin K a dependable penicillin for oral use.

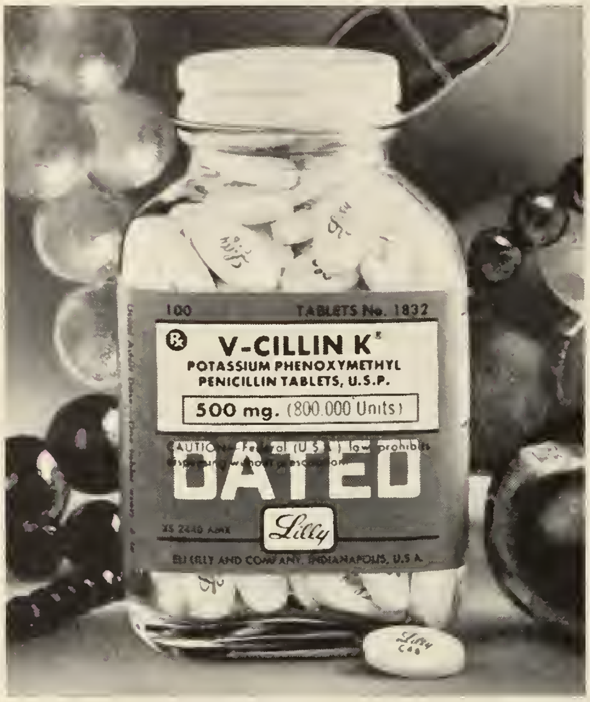
V-Cillin K® 701449

Potassium Phenoxymethyl Penicillin

Now available: V-Cillin K®, Pediatric, for Oral Solution, 250 mg. (400,000 units) per 5 cc. of solution.

(See next page for prescribing information.)

New 500 mg. tablets...a more convenient way to give high doses


100
TABLETS No. 1832
V-CILLIN K
POTASSIUM PHENOXYMETHYL PENICILLIN TABLETS, U.S.P.
500 mg. (800,000 Units)
DATED
Lilly
ELI LILLY AND COMPANY, INDIANAPOLIS, U.S.A.

Description: V-Cillin K, the potassium salt of V-Cillin® (phenoxymethyl penicillin, Lilly), combines acid stability with immediate solubility and rapid absorption. Higher, more rapid serum levels are obtained than with equal oral doses of penicillin G.

Indications: Streptococcus, pneumococcus, and gonococcus infections; infections caused by sensitive strains of staphylococci; prophylaxis of streptococcus infections in patients with a history of rheumatic fever; and prevention of bacterial endocarditis after tonsillectomy and tooth extraction in patients with a history of rheumatic fever or congenital heart disease.

Contraindication: Penicillin hypersensitivity.

Warnings: In rare instances, penicillin may cause acute anaphylaxis which may prove fatal unless promptly controlled. This type of reaction appears more frequently in patients with a history of sensitivity reactions to penicillin or with bronchial asthma or other allergies. Resuscitative drugs should be readily available. These include epinephrine and pressor drugs (as well as oxygen for inhalation) for immediate allergic manifestations and antihistamines and corticosteroids for delayed effects.

Precautions: Use cautiously, if at all, in a patient with a strongly positive history of allergy.

In prolonged therapy with penicillin, and particularly with high parenteral dosage schedules, frequent evaluation of the renal and hematopoietic systems is recommended.

In suspected staphylococcus infections, proper laboratory studies (including sensitivity tests) should be performed.

The use of penicillin may be associated with the overgrowth of penicillin-insensitive organisms. In such cases, discontinue administration and take appropriate measures.

Adverse Reactions: Although serious allergic reactions are much less common with oral penicillin than with intramuscular forms, manifestations of penicillin allergy may occur.

Penicillin is a substance of low toxicity, but it possesses a significant index of sensitization. The following hypersensitivity reactions have been reported: skin rashes ranging from maculopapular eruptions to exfoliative dermatitis; urticaria; and reactions resembling serum sickness, including chills, fever, edema, arthralgia, and prostration. Severe and often fatal anaphylaxis has occurred (see Warnings). Hemolytic anemia, leukopenia, thrombocytopenia, and nephropathy are rarely observed side-effects and are usually associated with high parenteral dosage.

Administration and Dosage: Usual dosage range, 125 mg. (200,000 units) three times a day to 500 mg. (800,000 units) every four hours. For infants, 50 mg. per Kg. per day divided into three doses.

See package literature for detailed dosage instructions for prophylaxis of streptococcus infections, surgery, gonorrhea, and severe infections.

How Supplied: Tablets V-Cillin K, U.S.P., 125 mg. (200,000 units), 250 mg. (400,000 units), and 500 mg. (800,000 units).

V-Cillin K, Pediatric, for Oral Solution, 125 mg. (200,000 units) and 250 mg. (400,000 units) per 5 cc. of solution (approximately one teaspoonful). [042567]

Additional information available to physicians upon request. Eli Lilly and Company, Indianapolis, Indiana 46206.

Lilly

701449

A Building Block approach to treating hypertension

ABBOTT

With these three therapeutic building blocks you can create a once-a-day regimen to fit almost any degree of hypertension. See the following pages for details . . .

Consider starting your hypertensives on this basic thiazide

ABBOTT

A single daily dose of Enduron provides sodium excretion around the clock

Enduron is a true 24-hour single-dose thiazide. Its sodium excretion is not squeezed into an abrupt peak during the first several hours. It is well-sustained in a plateau-like effect—with little reduction for the first 12 hours, and decline thereafter only gradual.

Potassium loss, by contrast, is low. It reaches an early minor peak, then subsides rapidly. Moreover, since dosage is but once a day, there is but one daily peak of potassium loss. As with all thiazides, however, dietary potassium supplementation should also be considered, especially in long or intensive therapy.

Use Enduron as an ideal starting therapy in mild hypertension. Use it too, as a basic therapeutic building block with which other agents can be joined, for managing your more resistant hypertensives.

Once a day, every day

ENDURON®
METHYCLOTHIAZIDE

DAILY DOSAGE RANGE	Minimum	Usual	Intermediate	Maximum
	2.5 mg. tablet	5 mg. tablet	7.5 mg.	10 mg.

See Brief Summary on final page of advertisement.

To build added response, shift to Enduronyl

ABBOTT

The deserpidine component adds enhanced antihypertensive activity

The rauwolfia component of Enduronyl is deserpidine (Harmonyl®), a purified crystalline alkaloid supplied only by Abbott. It augments Enduron with its own antihypertensive and tranquilizing action.

Thus the combined clinical effect of these two therapeutic building blocks in Enduronyl is greater than can ordinarily be achieved with either alone.

To add flexibility, Enduronyl comes in two strengths: regular and Forte. Both provide 5 mg. of Enduron. The variation is where most helpful: in the deserpidine. The tablets are scored, and give a surprisingly wide and economical choice of once-a-day doses (see below).

Choose Enduronyl for your patients in the broad range of mild to moderate hypertension. Patient acceptance is excellent!

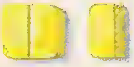
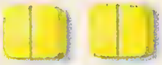
Once a day, every day

ENDURONYL®

METHYCLOTHIAZIDE 5 MG. WITH DESERPIDINE 0.25 MG.

ENDURONYL FORTE

METHYCLOTHIAZIDE 5 MG. WITH DESERPIDINE 0.5 MG.

	Minimum	Usual	Intermediate	Maximum
DAILY DOSAGE RANGE	 2.5 mg. methyclothiazide 0.125 mg. deserpidine	 5 mg. methyclothiazide 0.25 mg. deserpidine	 7.5 mg. methyclothiazide 0.375 mg. deserpidine	 10 mg. methyclothiazide 0.5 mg. deserpidine
DAILY DOSAGE RANGE	 2.5 mg. methyclothiazide 0.25 mg. deserpidine	 5 mg. methyclothiazide 0.5 mg. deserpidine	 7.5 mg. methyclothiazide 0.75 mg. deserpidine	 10 mg. methyclothiazide 1 mg. deserpidine

See Brief Summary on final page of advertisement.

707075-R

Eutonyl affords a different kind of basic therapy for moderate to severe cases

ABBOTT

Effect tied to reduced peripheral vascular resistance; no central depressant action

Eutonyl is a unique nonhydrazine agent. It is reported to act by reducing peripheral vascular resistance.[1,2]

In clinical trials, significant reductions in mean blood pressure were seen in 84% of patients studied—all were moderate to severe cases. Eutonyl lowers diastolic in proportion to systolic, and in about half of the cases studied, reductions in the sitting and recumbent positions were nearly as great as in the standing position.

Most important: There is no central depressant action. In fact, some patients reported an *increased* sense of well being.

Here, then, is a highly effective *basic treatment* for moderate to severe cases—and one that will not hamper your patient with lethargy or drowsiness while on treatment.

Once a day, every day

EUTONYL®

PARGYLINE HYDROCHLORIDE

DAILY DOSAGE RANGE	Minimum	Usual starting	Intermediate	Maximum
	10 mg. tablet	25 mg. tablet	50 mg. tablet or as needed	200 mg.

---

1. *Brest, A. N., et al., Cardiac and Renal Hemodynamic Response to Pargyline, Ann. N. Y. Acad. Sci., 107-1016, 1963.*
2. *Winsor, T., Pargyline Hydrochloride, Hypertension, Urinary Tryptamine, and Vascular Reflexes, Geriatrics, 19:598, Aug., 1964.*

See Brief Summary on final page of advertisement.

Eutron adds thiazide for enhanced therapy with milder side effects

ABBOTT

Only a 7/4 mm. span between standing and recumbent pressures in clinical trials—reduced chance of orthostatic hypotension

The combining of Eutonyl and Enduron in Eutron permits a significantly greater antihypertensive effect than with either agent used alone. This in turn may allow therapeutic success with lesser dosage—and correspondingly milder side effects.

A significant finding in clinical trials was the drug's action in lowering blood pressure to *nearly equal levels in all body positions.* Total average spread between standing and recumbent readings (after treatment) was only 7/4 mm. Hg.

Thus, in your moderate to severe cases, Eutron affords a usually smooth course of therapy, often with reduced likelihood of orthostatic effects. (The usual precautions against rising suddenly, of course, will always apply.) And, because of the thiazide component, Eutron may be used in the presence of congestive heart failure.

Once a day, every day

EUTRON™

PARGYLINE HYDROCHLORIDE 25 MG.
WITH METHYCLOTHIAZIDE 5 MG.

	Minimum	Usual starting	Intermediate	Maximum
DAILY DOSAGE RANGE				
	12.5 mg. pargyline hydrochloride and 2.5 mg. methyclothiazide	25 mg. pargyline hydrochloride and 5 mg. methyclothiazide	37.5 mg. pargyline hydrochloride and 7.5 mg. methyclothiazide	50 mg. pargyline hydrochloride and 10 mg. methyclothiazide

See Brief Summary on final page of advertisement.

TM—Trademark

707075-R

ENDURON | ENDURONYL

METHYCLOTHIAZIDE

Each tablet contains
Methyclothiazide 5 mg. with
Deserpidine 0.25 mg. or 0.5 mg.

Indications: Enduron is used to control edema and mild to moderate hypertension; also used with other drugs for hypertension. Enduronyl is used in mild to moderately severe hypertension; when used with Enduronyl, more potent agents can be given at reduced dosage to minimize undesirable side effects.

Contraindications: Neither Enduron nor Enduronyl should be used in severe renal disease (except nephrosis) or shutdown; in severe hepatic disease or impending hepatic coma; in patients sensitive to thiazides. Hepatic coma has been reported as a result of hypokalemia in patients receiving thiazides.

Enduronyl is contraindicated in patients with severe mental depression and suicidal tendencies, active peptic ulcer, or ulcerative colitis.

Warnings: Consider possible sensitivity reactions in patients with a history of allergy or asthma. If added potassium intake is indicated, dietary supplementation is recommended. Enteric-coated potassium tablets should be reserved for cautious use only when adequate dietary supplementation is not practical because those tablets may induce serious or fatal small bowel lesions consisting of stenosis with or without ulceration. These small bowel lesions have caused obstruction, hemorrhage and perforation frequently requiring surgery. Medication should be discontinued immediately if abdominal pain, distension, nausea, vomiting or GI bleeding occurs.

Precautions: Use thiazides with caution in severe renal dysfunction, impaired hepatic function, or progressive liver disease. In surgical patients, thiazides may reduce the response to vasopressors and increase the response to tubocurarine. Use thiazides with caution in pregnancy (bone marrow depression, thrombocytopenia, or altered carbohydrate metabolism have been reported in certain newborn infants). Also reported have been: blood dyscrasias including thrombocytopenia with purpura, agranulocytosis and aplastic anemia; elevations of BUN, serum uric acid, or blood sugar. Symptomatic gout may be induced. Antihypertensive response may be enhanced following sympathectomy.

Use Enduronyl with caution in patients with a history of peptic ulcer, as rauwolfias may increase gastric secretion. Discontinue at the first sign of mental depression. Rauwolfia alkaloids may increase hypotensive effects of surgery or anesthesia, and should be discontinued two weeks prior. They also lower the convulsive threshold and shorten seizure latency. In epilepsy, dosage adjustment of anticonvulsant medication may be necessary. Alcohol, barbiturates, or narcotics may potentiate action of deserpidine.

Adverse Reactions: During intensive or prolonged therapy, guard against hypochloremic alkalosis and hypokalemia (especially the latter if patient is on digitalis). All patients should be observed for signs of hyponatremia ("low-salt" syndrome). Reported thiazide reactions include: anorexia, nausea, vomiting, diarrhea, headache, skin rash, dizziness, paresthesia, weakness, photosensitivity, jaundice, and pancreatitis.

Reported rauwolfia reactions include: nasal stuffiness, nausea, weight gain, diarrhea, aggravation of peptic ulcer, epistaxis, skin eruption, and reduction of libido and potency. Excessive drowsiness, fatigue, weakness, and nightmares may signal early signs of mental depression.

EUTONYL® | EUTRON™

PARGYLINE HYDROCHLORIDE

Each tablet contains
Pargyline Hydrochloride 25 mg.
with Methyclothiazide 5 mg.

Indications: For treatment of patients with moderate to severe hypertension, especially those with severe diastolic hypertension. Not recommended for patients with mild or labile hypertension amenable to therapy with sedatives and/or thiazide diuretics alone. It is desirable to establish the dosage of Eutron by administering component drugs separately.

TM-Trademark.

Contraindications: Pheochromocytoma, advanced renal disease, increasing renal dysfunction, paranoid schizophrenia and hyperthyroidism. Hepatic coma has been reported as consequence of hypokalemia with thiazide therapy. Until further experience is gained not recommended for patients with malignant hypertension, children under 12, or pregnant patients.

Concomitant use of the following is contraindicated: other monoamine oxidase inhibitors; parenteral forms of reserpine or guanethidine; sympathomimetic drugs; foods high in tyramine such as cheese; imipramine and amitriptyline, or similar antidepressants; methyldopa. 2 week interval should separate therapy and use of these agents.

Methyclothiazide is contraindicated in patients with known sensitivity to thiazides.

Warnings: Pargyline hydrochloride is a monoamine oxidase inhibitor. Warn patients against eating cheese, and using alcohol, proprietary drugs or other medication without the knowledge of the physician. When indicated, alcohol, narcotics (meperidine should be avoided), antihistamines, barbiturates, chloral hydrate, and other hypnotics, sedatives, tranquilizers, or caffeine, may be used cautiously in reduced dosage. In emergency surgery ¼ to ⅕ the usual dose of narcotics, analgesics, and other premedications should be used avoiding parenteral administration where possible. Carefully adjust dose of anesthetics to response of patient. Withdraw pargyline two weeks before elective surgery.

Warn patients about the possibility of postural hypotension. Those with angina or coronary artery disease should not increase physical activity with an improvement in well being. Pargyline may lower blood sugar.

Avoid use of enteric-coated potassium tablets, as these may induce serious or fatal small-bowel lesions consisting of stenosis with or without ulceration. These small-bowel lesions have caused obstruction, hemorrhage and perforation frequently requiring surgery. Medication should be discontinued immediately if abdominal pain, distension, nausea, vomiting or GI bleeding occurs. These products contain no added potassium salts and if added potassium intake is desired, dietary supplementation is recommended. Coated potassium tablets should be reserved for cautious use when adequate dietary supplementation is impractical. In patients with a history of allergy or asthma the possibility of sensitivity reactions should be considered.

Precautions: Measure blood pressure while patient is standing to determine antihypertensive effect. Use with caution in hyperactive or hyperexcitable persons. Such persons may show increased restlessness and agitation. Withdraw drug during acute febrile illness. Watch patients with impaired renal function for increasing drug effects or elevation of BUN and other evidence of progressive renal failure; withdraw drug if such alterations persist and progress. Use with caution in patients with liver disease. As with all new drugs, complete blood counts, urinalyses, and liver function tests should be performed periodically. With prolonged therapy, examine patients for change in color perception, visual fields and fundi. Also reported have been: blood dyscrasias including thrombocytopenia with purpura, agranulocytosis and aplastic anemia; elevations of BUN, serum uric acid, or blood sugar. Symptomatic gout may be induced. In surgical patients thiazides may reduce response to vasopressors and increase response to tubocurarine.

Adverse Reactions: Pargyline may be associated with orthostatic hypotension. Mild constipation, slight edema, dry mouth, sweating, increased appetite, arthralgia, nausea and vomiting, headache, insomnia, difficulty in micturition, nightmares, impotence, delayed ejaculation, rash, and purpura have been encountered with pargyline. Hyperexcitability, increased neuromuscular activity (muscle twitching) and other extrapyramidal symptoms have been reported in a few patients with reduced cardiac reserve.

During intensive or prolonged therapy, guard against hypochloremic alkalosis and hypokalemia (especially the latter if patient is on digitalis). Observe all patients for signs of hyponatremia ("low salt" syndrome).

Reported thiazide reactions also include anorexia, nausea, vomiting, diarrhea, headache, dizziness, paresthesia, weakness, skin rash, photosensitivity, jaundice, and pancreatitis. Nocturia has been observed with the combination.

709075R

ABBOTT

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ESTABLISHED — 1916
ASHEVILLE NORTH CAROLINA

An institution for the diagnosis and treatment of Psychiatric and Neurological illnesses, rest, convalescence, drug and alcohol habituation.

Insulin, Coma, Electroshock and Psychotherapy are employed. The institution is equipped with complete laboratory facilities including electroencephalography and X-ray.

Appalachian Hall is located in Asheville, North Carolina, a resort town, which justly claims an all around climate for health and comfort. There are ample facilities for classification of patients, rooms single or en suite.

Wm. Ray Griffin, Jr., M.D. Mark A. Griffin, Sr., M.D.
Robert A. Griffin, M.D. Mark A. Griffin, Jr., M.D.

For rates and further information write APPALACHIAN HALL, ASHEVILLE, N. C.

in the bronchitis–emphysema syndrome ...bronchodilation without pressor effects

Most bronchodilators for use in pulmonary emphysema contain ephedrine-like drugs. ELIXOPHYLLIN® never did. So, ELIXOPHYLLIN will not cause tachycardia, palpitations, nervousness, insomnia, or other undesirable side effects of ephedrine-like products. Even patients with hypertension, cardiac insufficiency, hyperthyroidism, prostate hypertrophy and glaucoma can take ELIXOPHYLLIN.

Other advantages of ELIXOPHYLLIN: rapid and sustained bronchodilation • proven increase in pulmonary function • adrenergic abuse eliminated.

ELIXOPHYLLIN is theophylline in free and soluble form—resulting in rapid and dependable absorption with less risk of gastric irritation.

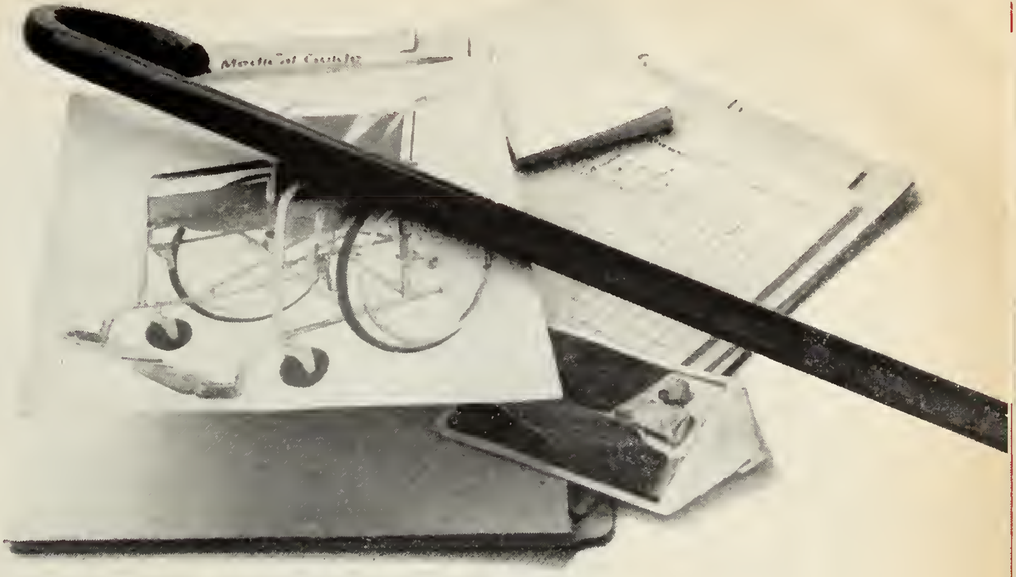
Adult maintenance dosage in bronchitis and pulmonary emphysema: one ounce (30 ml.) t.i.d. on arising, at 3 P.M., and on retiring. Adjust dosage to patient response. This average dosage provides continuous bronchodilation. Do not administer other xanthine preparations concurrently. May be contraindicated in peptic ulcer.

ELIXOPHYLLIN®

Each 15 ml. contains theophylline (anhydrous) 80 mg.; alcohol 20%

Sherman Laboratories

Detroit, Michigan 48211



in chronic illness

B and C vitamins are part of therapy: An imbalance of water-soluble vitamins and chronic illness often go hand in hand. STRESSCAPS capsules, containing therapeutic quantities of vitamins B and C, are formulated to meet the increased metabolic demands of patients with physiologic stress. In chronic illness, as with many stress conditions, STRESSCAPS vitamins are therapy.

Stresscaps®

Stress Formula Vitamins Lederle

FOR PROFESSIONAL RECOMMENDATION ONLY

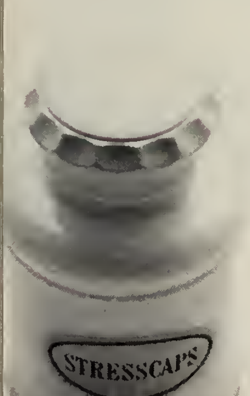
Each capsule contains:

Vitamin B_1 (as Thiamine Mononitrate)	10 mg
Vitamin B_2 (Riboflavin)	10 mg
Vitamin B_6 (Pyridoxine HCl)	2 mg
Vitamin B_{12} Crystalline	4 mcgm
Vitamin C (Ascorbic Acid)	300 mg
Niacinamide	100 mg
Calcium Pantothenate	20 mg

Recommended intake: Adults, 1 capsule daily, for the treatment of vitamin deficiencies. Supplied in decorative "reminder" jars of 30 and 100; bottles of 500.

LEDERLE LABORATORIES, A Division of American Cyanamid Company, Pearl River, New York Lederle

628-6—3614



"George wants to know if it's okay to take his cold medicine now, Doctor, instead of seven o'clock?"

The long-continued action of Novahistine LP should help you both get a good night's sleep. Two tablets in the morning and two in the evening will usually provide round-the-clock relief by helping clear congested air passages for freer breathing. Novahistine LP also helps restore normal mucus secretion and ciliary activity—normal physiologic defenses against infection of the respiratory tract. Use cautiously in individuals with severe hypertension, diabetes mellitus, hyperthyroidism or urinary retention. Caution ambulatory patients that drowsiness may result. Each Novahistine LP tablet contains: phenylephrine hydrochloride, 25 mg., and chlorpheniramine maleate, 4 mg.

NOVAHISTINE® LP

DOW **PITMAN-MOORE** Division of The Dow Chemical Company, Indianapolis

Synirin®

ACETYLSALICYLIC ACID (ASPIRIN)..... 5 GR.
*PENTOBARBITAL (ACID)........... 1/8 GR.
*Warning: may be habit-forming

Synirin provides prompt barbiturate potentiation of aspirin without limiting the therapeutic usage of aspirin. Both pentobarbital and aspirin begin their action together promptly and last 4 or 5 hours. There is no accumulation.

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SYNIRIN is another pharmaceutical achievement

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Manufacturers of ethical pharmaceuticals since 1856

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The current concept that community mental health centers will be of great benefit because they will help to prevent "mental illness" by permitting early observation and "therapy" of many persons with minor behavioral disturbances is entirely unproven. Although great hope was held for Child Guidance Clinics, such clinics have completely failed to reduce the incidence of mental illness. The report of the Joint Commission on Mental Illness and Health states: "Our hope of preventing mental illness by mental health education and child guidance clinics has been disappointed." There is no evidence that the mental illnesses which fill our mental hospitals are preventable by any form of therapy available today. In spite of this, essentially the same slogans used by advocates of Child Guidance Clinics are now employed by advocates of the new Comprehensive Community Mental Health Centers.

Massachusetts Physician 26:294

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urethritis?
prostatitis?

in any case,
usually gram-negative*

Therapy:

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- Low incidence of untoward effects; no fungal overgrowth, crystalluria, ototoxic or nephrotoxic effects have been observed.
- "Excellent" or "good" response reported *in more than 2 out of 3* patients with either chronic or acute gram-negative infections.[1]

*As many as 9 out of 10 urinary tract infections are now caused by gram-negative organisms: E. coli, Klebsiella, Aerobacter, Proteus, Paracolon or Pseudomonas[2]... However, infections of the urethra and prostate caused by non-gonococcal gram-negative organisms are believed to be less prevalent.

ndications: Urinary tract infections caused by gram-negative and some gram-ositive organisms.

ilde effects: Mainly mild, transient gastrointestinal disturbances; in ccasional instances, drowsiness, fatigue, pruritus, rash, urticaria, mild osinophilia, reversible subjective visual disturbances (overbrightness of ghts, change in visual color perception, difficulty in focusing, decrease in isual acuity and double vision), and reversible photosensitivity reactions. larked overdosage, coupled with certain predisposing factors, has produced rief convulsions in a few patients.

recautions: As with all new drugs, blood and liver function tests are advisble during prolonged treatment. **Pending further experience, like most hemotherapeutic agents, this drug should not be given in the first trimester f pregnancy. It must be used cautiously in patients with liver disease or evere impairment of kidney function.** Because photosensitivity reactions have ccurred in a small number of cases, patients should be cautioned to avoid nnecessary exposure to direct sunlight while receiving NegGram, and if a eaction occurs, therapy should be discontinued. The dosage recommended or adults and children should not arbitrarily be doubled unless under the areful supervision of a physician. Bacterial resistance may develop.

hen testing the urine for glucose in patients receiving NegGram, Clinistix® eagent Strips or Tes-Tape® should be used since other reagents give a alse-positive reaction.

osage: Adults: Four Gm. daily by mouth (2 Caplets® of 500 mg. four times aily) for one to two weeks. Thereafter, if prolonged treatment is indicated, he dosage may be reduced to two Gm. daily. Children may be given pproximately *25 mg. per pound* of body weight per day, administered in ivided doses. The dosage recommended above for adults and children hould not arbitrarily be doubled unless under the careful supervision of a hysician. Until further experience is gained, infants under 1 month hould not be treated with the drug.

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eferences: (1) Based on 23 clinical papers, 1512 cases. Bibliography on equest. (2) Bush, I. M., Orkin, L. A., and Winter, J. W., in Sylvester, J. C.: ntimicrobial Agents and Chemotherapy—1964, Ann Arbor, American ociety for Microbiology, 1965, p. 722.

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Precautions: In the elderly and debilitated, and in children over six, limit to smallest effective dosage (initially 10 mg or less per day) to preclude ataxia or oversedation, increasing gradually as needed and tolerated. Not recommended in children under six. Though generally not recommended, if combination therapy with other psychotropics seems indicated, carefully consider individual pharmacologic effects, particularly in use of potentiating drugs such as MAO inhibitors and phenothiazines. Observe usual precautions in presence of impaired renal or hepatic function. Paradoxical reactions (e.g., excitement, stimulation and acute rage) have been reported in psychiatric patients and hyperactive aggressive children. Employ usual precautions in treatment of anxiety states with evidence of impending depression; suicidal tendencies may be present and protective measures necessary. Variable effects on blood coagulation have been reported very rarely in patients receiving the drug and oral anticoagulants; causal relationship has not been established clinically.

Adverse Reactions: Drowsiness, ataxia and confusion may occur, especially in the elderly and debilitated. These are reversible in most instances by proper dosage adjustment, but are also occasionally observed at the lower dosage ranges. In a few instances syncope has been reported. Also encountered are isolated instances of skin eruptions, edema, minor menstrual irregularities, nausea and constipation, extrapyramidal symptoms, increased and decreased libido—all infrequent and generally controlled with dosage reduction; changes in EEG patterns (low-voltage fast activity) may appear during and after treatment; blood dyscrasias (including agranulocytosis), jaundice and hepatic dysfunction have been reported occasionally, making periodic blood counts and liver-function tests advisable during protracted therapy.

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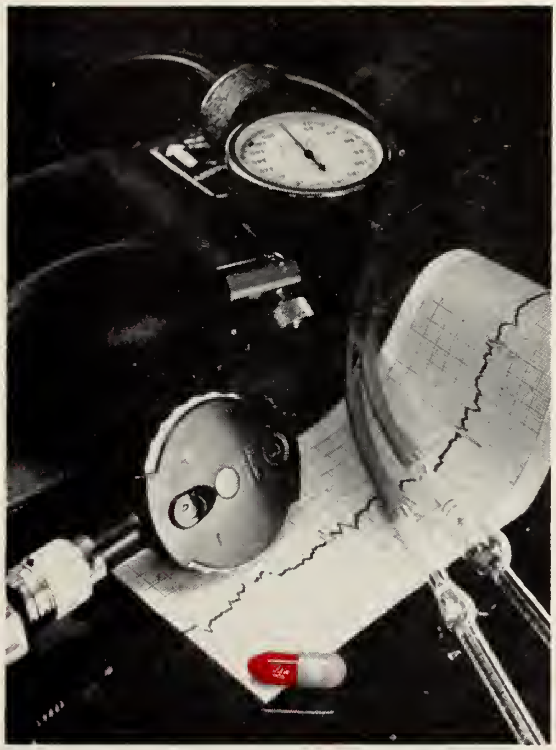

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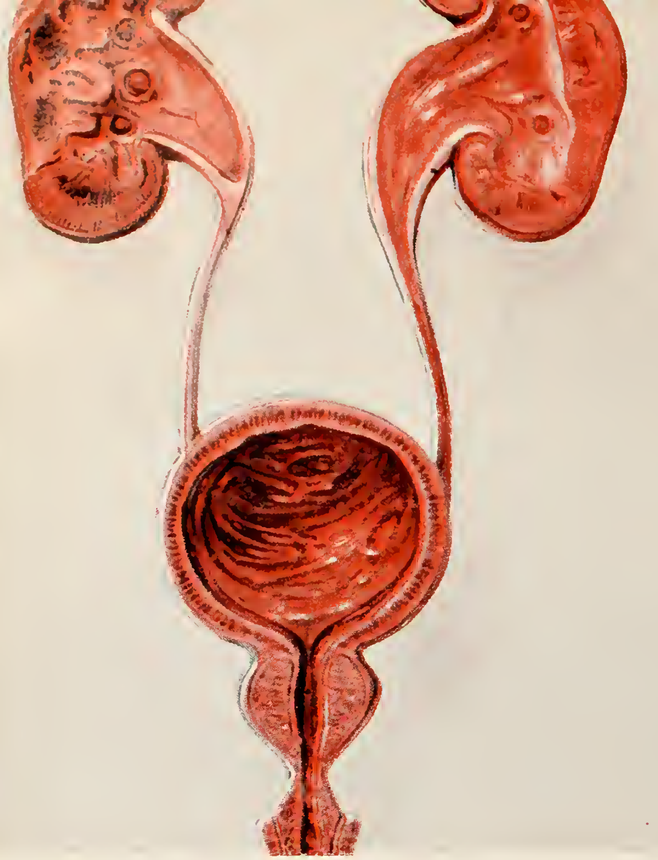

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pyelitis?
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in any case,
usually gram-negative*

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two 500 mg. Caplets® q.i.d
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- Low incidence of untoward effects; no fungal overgrowth, crystalluria, ototoxic or nephrotoxic effects have been observed.
- "Excellent" or "good" response reported *in more than 2 out of 3* patients with either chronic or acute gram-negative infections.[1]

*As many as 9 out of 10 urinary tract infections are now caused by gram-negative organisms: E. coli, Klebsiella, Aerobacter, Proteus, Paracolon or Pseudomonas[2]... However, infections of the urethra and prostate caused by non-gonococcal gram-negative organisms are believed to be less prevalent.

Summary of prescribing information

Indications: Urinary tract infections in which gram-negative bacteria are predominant, particularly *Proteus, Escherichia coli, Aerobacter, Klebsiella,* and certain strains of *Pseudomonas.* Gram-positive bacteria are less sensitive to NegGram but favorable clinical results have been observed.

Warning: Use in Pregnancy. This drug is not recommended in the first trimester of pregnancy. However, it has been used in several patients during the last two trimesters without producing apparent ill effects in either mother or fetus.

Precautions: As with all new drugs, periodic blood and liver function tests are advisable during treatment longer than 1 or 2 weeks. **This drug should be used with caution in patients with liver disease, epilepsy, severe cerebral arteriosclerosis, or severe impairment of kidney function.** Because photosensitivity reactions have been reported in a small number of cases, patients should be cautioned to avoid unnecessary exposure to direct sunlight while receiving NegGram, and if a photosensitivity reaction occurs, therapy should be discontinued. The dosage recommended for adults and children should not arbitrarily be doubled unless under the careful supervision of a physician. Should bacterial resistance develop or additional nonsensitive strains emerge, other effective antibacterial agents should be added to or substituted for NegGram.

When testing the urine for glucose in patients receiving NegGram, Clinistix® Reagent Strips or Tes-Tape® should be used since other reagents may give a false-positive reaction.

Adverse reactions: Mainly mild nausea, vomiting, and other gastrointestinal disturbances; less frequently, sleepiness, drowsiness, weakness, headache, dizziness and vertigo, and rarely cholestasis, paresthesia, thrombocytopenia, leukopenia, or hemolytic anemia in patients with a deficiency in activity of glucose-6-phosphate dehydrogenase. Itching, pruritus, rash, urticaria, mild eosinophilia, reversible photosensitivity reactions primarily involving exposed surfaces, and reversible subjective visual disturbances (overbrightness of lights, change in visual color perception, difficulty in focusing, decrease in visual acuity and double vision), occurred occasionally. Reversible increased intracranial pressure with bulging anterior fontanel, papilledema, and headache has been observed occasionally in infants and children. Toxic psychosis and brief convulsions (the latter generally in patients with possible predisposing factors, and both usually associated with excessive dosage) have been recorded in rare instances.

Dosage and administration: ***Adults*** **— Four Gm. daily by mouth (2 Caplets® of 500 mg. four times daily) for one to two weeks. Thereafter, if prolonged treatment is indicated, the dosage may be reduced to two Gm. daily (1 Caplet of 500 mg. four times daily).** ***Children*** **— According to age and weight: approximately** ***25 mg. per pound*** **of body weight per day, administered in divided doses.**

Note: The dosage recommended above for adults and children should not arbitrarily be doubled unless under the careful supervision of a physician. Until further experience is gained, infants under 1 month should not be treated with the drug.

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Before prescribing, please refer to complete prescribing information.

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Adverse Reactions: The most common are nausea, edema and drug rash. Swelling of the ankles or face may be minimized by withholding dietary salt, reduction in dosage or use of diuretics. In elderly patients and in those with hypertension the drug should be discontinued with the appearance of edema. The drug has been associated with peptic ulcer and may reactivate a latent peptic ulcer. The patient should be instructed to take doses immediately before or after meals or with milk to minimize gastric upset. Mild drug rashes frequently subside with reduction of dosage. However, rash accompanied by fever or other systemic reactions usually requires withholding medication. Purpuric rash has also been reported. Agranulocytosis, ex-

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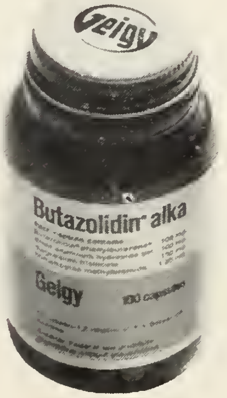

foliative dermatitis, Stevens-Johnson syndrome, or a generalized allergic reaction similar to serum sickness may occur and require permanent withdrawal of medication. Stomatitis, salivary gland enlargement, vomiting, vertigo and languor may occur. Leukemia and leukemoid reactions have been reported. While not definitely attributable to the drug, a causal relationship cannot be excluded. Thrombocytopenic purpura and aplastic anemia may occur. Confusional states, agitation, headache, blurred vision, optic neuritis and transient hearing loss have been reported, as have hyperglycemia, hepatitis, jaundice, and several cases of anuria and hematuria. With long-term use, reversible thyroid hyperplasia may occur infrequently. Moderate lowering of the red cell count due to hemodilution may occur.

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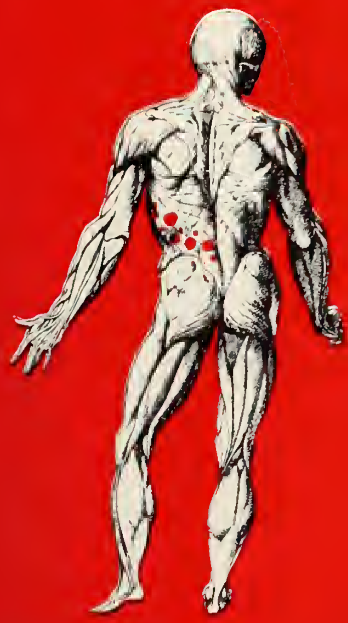

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References:
1. Combes, F. C. and Canizares, O.: *New York State J. Med.* 52:706-709 (Mar. 15) 1952
2. [illegible], G. W.: *Western Med.* 1:14 (Sept.) 1960
3. Baker, A. G.: *Penna. Med. J.* 63:697-698 (May) 1960
4. Lehrer, H. W., Lehrer, H. G., and Lehrer, D. R.: *Northwest Med.* 75:1249-1252 (Nov.) 1955

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PHENOBARBITAL . . . . 16 mg.
(Warning: may be habit forming)
BENSULFOID ® (See P D R) . . . . 65 mg.
Precaution: same as 16 mg. of phenobarbital

Constructive Therapy

A Solfoton tablet or capsule at 6 hour intervals maintains sedation at the threshold of calmness, sustaining a mental climate for purposeful living.

Literature and clinical samples sent upon request.

FEDERAL LAW PROHIBITS DISPENSING
WITHOUT PRESCRIPTION

AVAILABLE

Solfoton *(yellow, uncoated tablets "P")*
100s, 500s, 5000s

Solfoton Capsules *(yellow and brown)*
100s, 500s, 1000s

Solfoton S/C *(sugar-coated beige tablets)*
100s, 500s, 4000s

WM. P. POYTHRESS & CO., INC.
RICHMOND, VIRGINIA 23217
Manufacturers of ethical pharmaceuticals since 1856

Fairview, Inc.

1950-1967

"God is our Strength"

Fairview owns and operates four institutions, dedicated to treatment of specific types of illness.

Detoxification

Since 1950 the name Fairview has stood for integrity in the treatment of the alcoholic and excessive drinkers.

Two hospitals for detoxification are now under Fairview supervision.

Ridgeway, South Carolina, Phone 337-2259, Drawer 157
J. B. Floyd, M.D., Medical Director
Rebecca Humphries King, R. N., Head Nurse
Rev. Maxie C. Collins, Administrator

Travelers Rest, South Carolina, Phone 834-9095, P. O. Box 277
W. M. Shirley, M.D., Medical Director
Earline Langley, L.P.N., Head Nurse
Mrs. Dorotha Garrett, Administrator

Rehabilitation

The rehabilitation program for alcoholics at Fairview has drawn patients from 20 states and every county in South Carolina, from Cuba, Canada, Germany, Europe.

It combines medicine, psychology, and religion with work therapy, group therapy, personal counselling, a 30 day program.

Geriatrics. Convalescents, Long Term Care

Fairfield Home, a 65 bed Class I nursing home fully accredited by the American Joint Commission on Accreditation, certified for Medicare. Non-discrimination because of race, color, or creed.

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Pearline Bethune, R.N., Head Nurse
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Phone 337-2257, Drawer 158, Ridgeway, South Carolina

For better care, greater concern, by people who care.

after surgery

B and C vitamins are therapy: Therapeutic amounts of B and C in stress formula vitamins often are vital during periods of physiologic stress. STRESSCAPS capsules, designed to meet increased metabolic demands, aid in achieving a more comfortable convalescence, a more rapid recovery. After surgery, as in many stress conditions, STRESSCAPS vitamins are therapy.

Stresscaps®
Stress Formula Vitamins Lederle

FOR PROFESSIONAL RECOMMENDATION ONLY

Each capsule contains:

Vitamin B_1 (Thiamine Mononitrate)	10 mg
Vitamin B_2 (Riboflavin)	10 mg
Vitamin B_6 (Pyridoxine HCl)	2 mg
Vitamin B_{12} Crystalline	4 mcgm
Vitamin C (Ascorbic Acid)	300 mg
Niacinamide	100 mg
Calcium Pantothenate	20 mg

Recommended intake: Adults, 1 capsule daily, for the treatment of vitamin deficiencies. Supplied in decorative "reminder" jars of 30 and 100; bottles of 500.

LEDERLE LABORATORIES, A Division of American Cyanamid Company, Pearl River, New York Lederle

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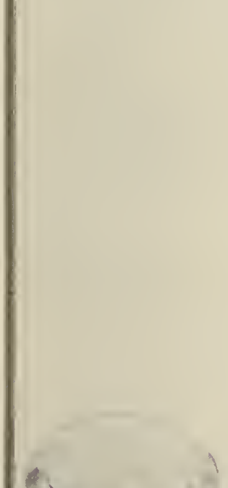


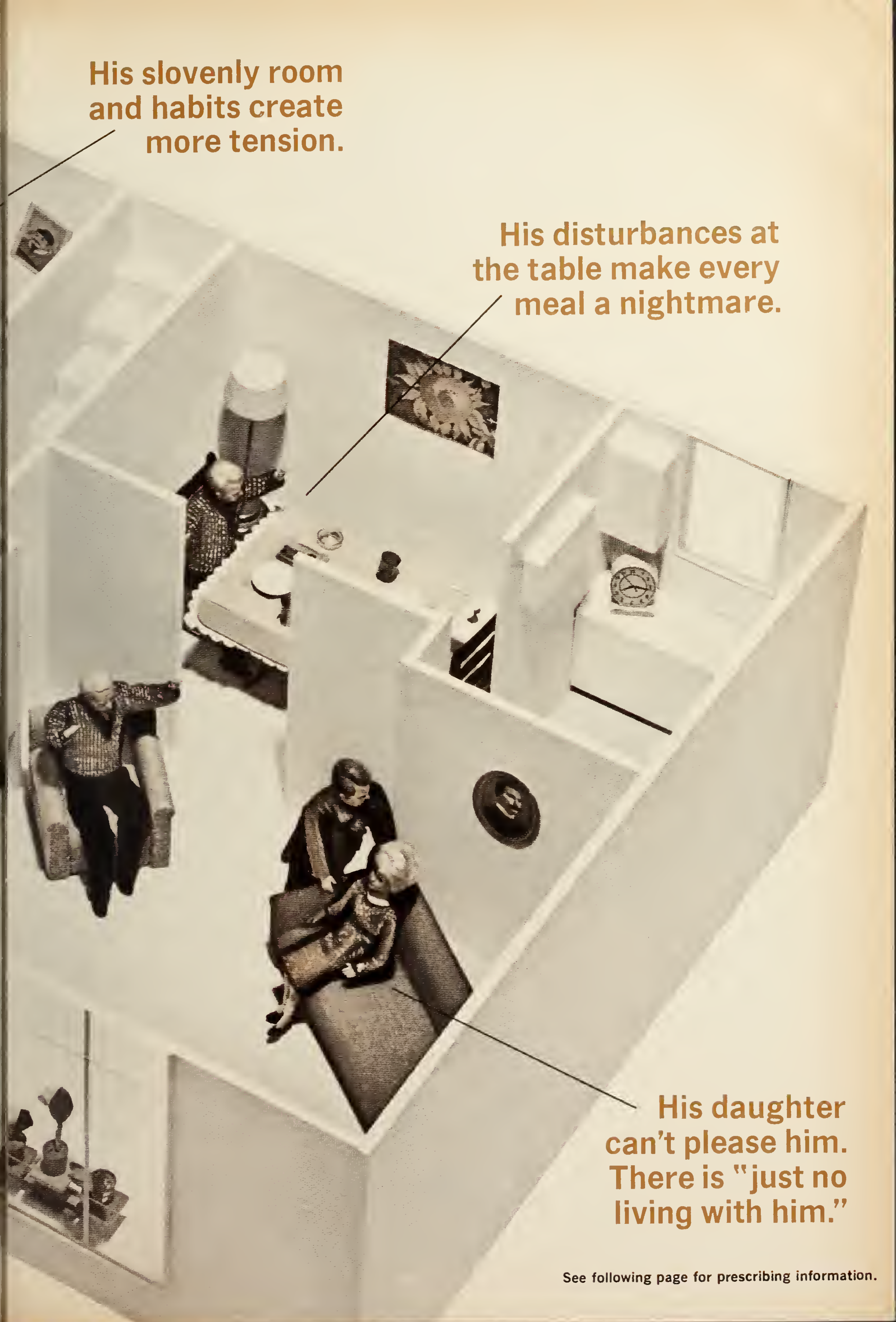
When the agitated geriatric disrupts the home...

His teen-age granddaughter won't invite friends home because of his outbursts.

for moderate to severe anxiety

Mellaril®
(thioridazine)
25 mg. t.i.d.

SANDOZ


His slovenly room and habits create more tension.
His disturbances at the table make every meal a nightmare.
His daughter can't please him. There is "just no living with him."

See following page for prescribing information.

When the agitated geriatric disrupts the home...

Anxiety that *seriously interferes* with the individual's performance at work, at home, or in the community may be regarded as *moderate* to *severe* in degree.

Mellaril often recommends itself to the treatment of moderate to severe anxiety because it

- helps control the most frequent symptoms: marked tension, agitation, apprehension, restlessness, hypermotility
- often alleviates anxiety-induced somatic complaints
- frequently helps strengthen emotional resources
- helps the patient maintain realistic contact with environment, closer harmony with family

Thus, when you consider the anxiety moderate to severe... consider Mellaril.

Contraindications: Severely depressed or comatose states from any cause, and in association with or following MAO inhibitors; severe hypertensive or hypotensive heart disease.

Precautions: Hypersensitivity reactions (e.g., leukopenia, agranulocytosis) and convulsive seizures are infrequent. Pigmentary retinopathy has been observed where doses in excess of those recommended were used for long periods of time. May potentiate central nervous system depressants, atropine, and phosphorus insecticides. Where complete mental alertness is required, administer the drug cautiously and increase dosage gradually. In addition, orthostatic hypotension (especially in female patients) has been observed. Epinephrine should be avoided in treatment of drug-induced hypotension.

Side Effects: Pseudoparkinsonism and other extrapyramidal disorders are infrequent; drowsiness, especially in high doses early in treatment, may occur; nocturnal confusion, dryness of the mouth, nasal stuffiness, headache, peripheral edema, lactation, galactorrhea, and inhibition of ejaculation are noted on occasion; photosensitivity and other allergic skin reactions may occur but are extremely rare.

Before prescribing, see package insert for full product information.

for moderate to severe anxiety

Mellaril®
(thioridazine)
25 mg. t.i.d.

SANDOZ

mudrane®

for

- EMPHYSEMA
- ASTHMA
- CHRONIC BRONCHITIS
- BRONCHIECTASIS

The fast-disintegrating uncoated tablet gives relief in 15 minutes

Each tablet contains:

Potassium Iodide	195 mg.
Aminophylline	130 mg.
Phenobarbital, Caution: May be habit forming	21 mg.
Ephedrine HCl	16 mg.

FEDERAL LAW PROHIBITS DISPENSING WITHOUT PRESCRIPTION

Precautions: Usual for aminophylline-ephedrine-phenobarbital. Iodides may cause nausea, long use may cause goiter. Discontinue if symptoms of iodism develop.

Iodide contraindications: tuberculosis, pregnancy.

DOSAGE

One tablet, with full glass of water, 3 or 4 times daily.

Dispensed in bottles of 100 and 1000 tablets.

MUDRANE GG—Formula, dosage and package identical to Mudrane—*except*—100 mg. glyceryl guaiacolate replaces the potassium iodide. The value of Mudrane cannot be enjoyed by a small group in which K.I. is contraindicated. Mudrane GG is prepared for this group.

MUDRANE GG ELIXIR—Four 5 cc teaspoonfuls is equivalent to one Mudrane GG tablet. Dosage adjusted to age and weight of child. Mudrane GG Elixir is for pediatric patients and those who think they cannot swallow tablets. Dispensed in pint and half gallon bottles.

WM. P. POYTHRESS & CO., INC.
RICHMOND, VIRGINIA 23217
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"Man's best friend" in wintertime diarrheas

In winter "flu" and viral gastroenteritis, Donnagel (4 oz. size!) can bring aid and comfort to sufferers from both diarrhea and its discomforts because it contains kaolin and pectin *plus* belladonna alkaloids (as in Donnatal®). Donnagel treats the whole diarrhea problem. Available on your prescription or recommendation.

For acute, non-specific diarrheas
Donnagel® -PG (Donnagel with paregoric equivalent).
Donnagel formula plus powdered opium, USP, 24.0 mg. (equivalent to paregoric 6 ml.) (warning: may be habit forming). Alcohol, 5%.
All the antidiarrheal benefits of paregoric without the unpleasant taste. Real banana flavor makes it acceptable, even to children.
See product literature before prescribing.

A. H. Robins Company
Richmond, Va. 23220

A·H·ROBINS

CLEAR
THE TRACT!
ROBITUSSIN®

THERE'S A FORMULATION FOR EVERY COUGHING NEED

All the Robitussins contain glyceryl guaiacolate, the outstanding expectorant agent that greatly increases the output of lower respiratory tract fluid. Increased RTF volume exerts a demulcent effect on the tracheo-bronchial mucosa, promotes ciliary action, and makes thick, inspissated mucus less viscid and easier to raise.

For coughs of colds and "flu"
ROBITUSSIN®
Each 5 cc. contains:

Glyceryl guaiacolate	100 mg.

Alcohol, 3.5%

For unproductive allergic coughs
ROBITUSSIN® A-C
Each 5 cc. contains:

Glyceryl guaiacolate	100 mg.
Pheniramine maleate	7.5 mg.
Codeine phosphate	10.0 mg.

(warning: may be habit forming)
Alcohol, 3.5%

Non-narcotic for 6-8 hour cough control
ROBITUSSIN®-DM
Each 5 cc. contains:

Glyceryl guaiacolate	100 mg.
Dextromethorphan hydrobromide .	15.0 mg.

Alcohol, 1.4%

New! Clears sinuses and nasal stuffiness as it relieves cough
ROBITUSSIN®-PE
Each 5 cc. contains:

Glyceryl guaiacolate	100 mg.
Phenylephrine hydrochloride . . .	10.0 mg.

Alcohol, 1.4%

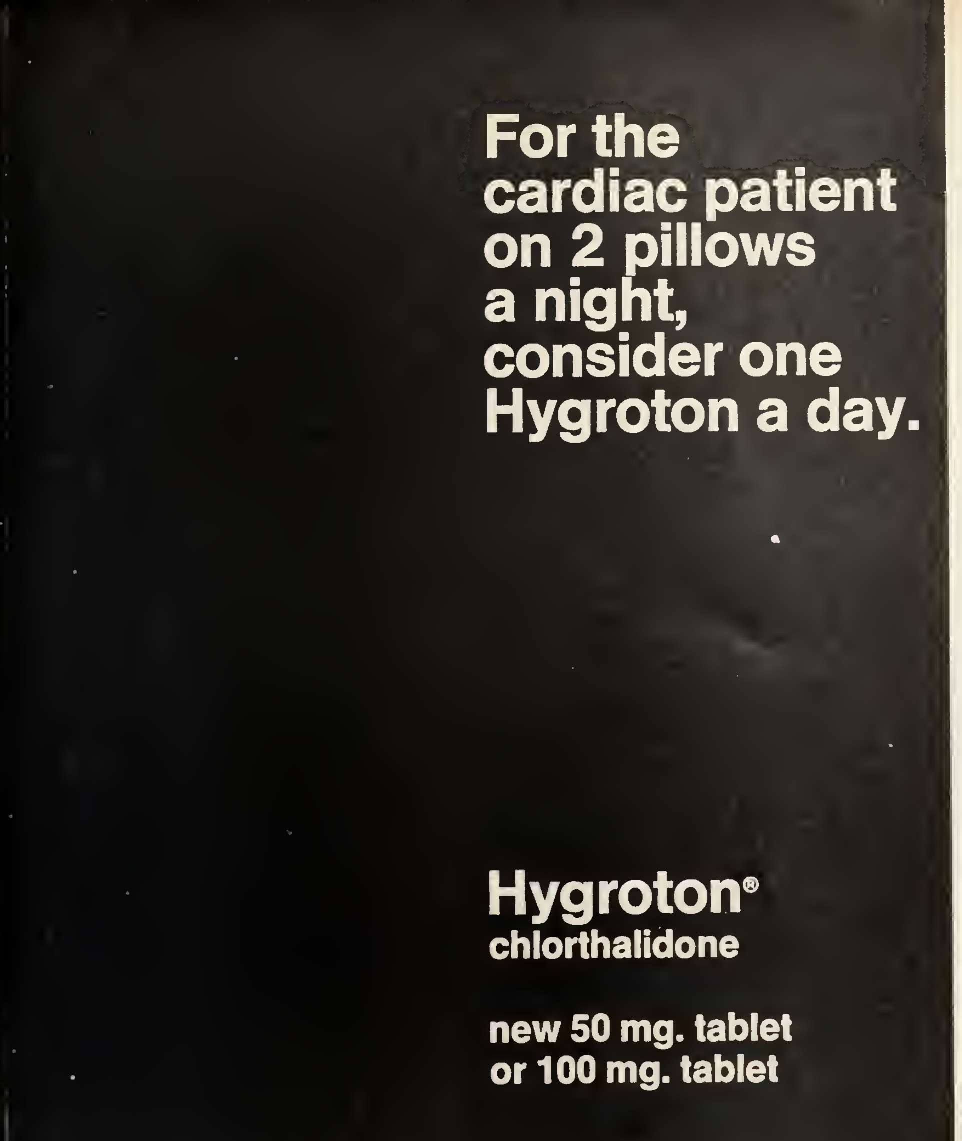
	ROBITUSSIN	ROBITUSSIN A-C	ROBITUSSIN-DM	ROBITUSSIN-PE
EXPECTORANT	●	●	●	●
DEMULCENT	●	●	●	●
COUGH SUPPRESSANT		●	●	
ANTIHISTAMINE		●		
LONG-ACTING (6-8 HOURS)			●	
NASAL, SINUS DECONGESTANT				●

PHOTO BY VICTOR HANO

A. H. Robins Company, Richmond, Va. 23220

A·H·ROBINS

Indications: Hypertension and many types of edema involving retention of salt and water.
Contraindications: Hypersensitivity and most cases of severe renal or hepatic disease.
Warning: With the administration of enteric-coated potassium supplements, which should be used only when adequate dietary supplementation is not practical, the possibility of small bowel lesions (obstruction, hemorrhage, and perforation) should be kept in mind. Surgery for these lesions has frequently been required and deaths have occurred. Discontinue enteric-coated potassium supplements immediately if abdominal pain, distention, nausea, vomiting, or gastrointestinal bleeding occur.
Use with caution in pregnant patients, since the drug may cross the placental barrier and adverse reactions which may occur in the adult (thrombocytopenia, hyperbilirubinemia, altered carbohydrate metabolism, etc.) are potential problems in the newborn.
Precautions: Antihypertensive therapy with Hygroton should always be initiated cautiously in postsympathectomy patients and in patients receiving ganglionic blocking agents or other potent antihypertensive drugs, or curare. Reduce dosage of concomitant antihypertensive agents by at least one-half. Barbiturates, narcotics or alcohol may potentiate hypotension. Because of the possibility of progression of renal damage, periodic determination of the BUN is indicated. Discontinue if the BUN rises or liver dysfunction is aggravated. Hepatic coma may be precipitated.
Electrolyte imbalance, sodium and/or potassium depletion may occur. If potassium depletion should occur during therapy, Hygroton should be discontinued and potassium supplements given, provided the patient does not have marked oliguria.
Take special care in cirrhosis or


For the cardiac patient on 2 pillows a night, consider one Hygroton a day.

Hygroton®
chlorthalidone

new 50 mg. tablet
or 100 mg. tablet

She was the picture of arteriosclerotic heart disease in failure. She couldn't sleep a wink without an extra pillow. Then her doctor prescribed digitalis and Hygroton.

First, her cardiac output improved. Then her breathing improved — along with her urinary output.

Nights could be a lot more pleasant for patients like this in your practice. Try it and see.

Hygroton therapy may also mean troublesome side effects for certain patients. A summary of essential prescribing information is shown below.

severe ischemic heart disease and in patients receiving corticosteroids, ACTH, or digitalis. Salt restriction is not recommended. **Adverse Reactions:** Nausea, gastric irritation, vomiting, anorexia, constipation and cramping, dizziness, weakness, restlessness, hyperglycemia, hyperuricemia, headache, muscle cramps, orthostatic hypotension, aplastic anemia, leukopenia, thrombocytopenia, agranulocytosis, impotence, dysuria, transient myopia, skin rashes, urticaria, purpura, necrotizing angiitis, acute gout, and pancreatitis when epigastric pain or unexplained G.I. symptoms develop after prolonged administration. Other reactions reported with this class of compounds include: jaundice, xanthopsia, paresthesia, and photosensitization. **Average Dosage:** 50 or 100 mg. with breakfast daily or 100 mg. every other day. **Availability:** White, single-scored tablets of 100 mg. and aqua tablets of 50 mg., in bottles of 100 and 1000. (B)R46-230-D

For full details, please see the complete prescribing information.

Geigy Pharmaceuticals
Division of
Geigy Chemical Corporation
Ardsley, New York 10502
HY-5405S

"When I couldn't even smell corned beef and cabbage, I decided it was time for you, Doc."

Maybe he doesn't know when he's well off. But you might want to prescribe long-acting Novahistine LP anyway.

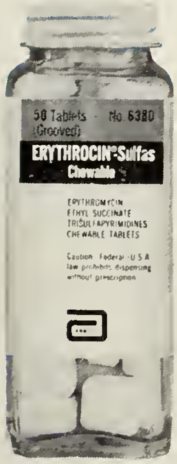
Two tablets in the morning and two in the evening will usually provide day and night relief by helping to clear congested air passages for normal, free breathing. Novahistine LP is formulated to provide continuous therapeutic effect for 8 to 12 hours. The decongestant ingredients help restore normal mucus secretion and ciliary activity—physiologic defenses against infection of the respiratory tract. Use cautiously in individuals with severe hypertension, diabetes mellitus, hyperthyroidism or urinary retention. Caution ambulatory patients that drowsiness may result. Each Novahistine LP tablet contains phenylephrine hydrochloride, 25 mg., and chlorpheniramine maleate, 4 mg.

NOVAHISTINE® LP

DOW **PITMAN-MOORE** Division of The Dow Chemical Company, Indianapolis

Perhaps there have been times when you wanted to prescribe erythromycin and triple sulfas for little patients. Now you can—with a choice of two new fine-tasting pediatric forms.

New– Two Pediatric Forms of Erythromycin and Triple Sulfas



ERYTHROCIN®-SULFAS Chewable (Erythromycin ethyl succinate-trisulfapyrimidines chewable tablet)

In clinical trials[1,2], this orange-flavored tablet was given to 55 patients, aged four months to 18 years.

Diagnoses (multiple in some cases) represented a cross section of bacterial infections commonly seen in pediatric office practice.

Therapy was given from three to 12 days, with an average of six days.

Of the 55 patients, 30 were reported cured within 72 hours, while 22 showed partial recovery within the same time, and subsequent clinical cure.

A clinical cure rate of 94.5%

ERYTHROCIN®-SULFAS Granules (Erythromycin ethyl succinate-trisulfapyrimidines granules for oral suspension)

87 patients were treated[1,2]—all children, ages four months to 15 years.

The diagnoses were multiple in some cases and were chiefly bacterial infections of the respiratory tract.

Dosage was maintained from three to 10 days; average treatment was five days. All of the ill children accepted the orange-flavored suspension favorably.

53 were clinically cured within 72 hours, while 32 showed partial relief within the same time, and subsequent clinical cure.

701358

A clinical cure rate of 97.7%

1. Case Reports on File, Dept. Clin. Development, Abbott Laboratories.
2. Polley, R.F.L., Use of Erythromycin-Sulfas in Office Practice, Western Med., 7:177, July, 1966.

ABBOTT

Brief
Summary
on next
page

ERYTHROCIN®-SULFAS
Brief Summary

Contraindications: Known sensitivity to erythromycin or sulfonamides. Because of the possibility of kernicterus with sulfonamides, do not use in pregnancy at term, premature or newborn infants.

Warnings: As with other forms of sulfonamide therapy, carefully evaluate patients with liver or kidney damage, urinary obstruction, or blood dyscrasia. Deaths have been reported from hypersensitivity reactions and blood dyscrasias following use of sulfonamides. Perform blood counts and liver and kidney function tests if used repeatedly at close intervals or for long periods.

Precautions, Side Effects: Occasionally mild abdominal discomfort, nausea or vomiting may occur with erythromycin, generally controlled by reduction of dosage. Mild allergic reactions (such as urticaria and other skin rashes) may occur. Serious allergic reactions have been extremely infrequent. Use sulfonamides with caution in patients with a history of allergy. Assure adequate fluid intake to prevent crystalluria and institute alkali therapy if indicated. If overgrowth of nonsusceptible organisms occurs, withdraw the drug and institute appropriate treatment. If a patient should show signs of hypersensitivity, appropriate countermeasures (e.g. epinephrine, steriods, etc.) should be administered and the drug withdrawn.

Adverse Reactions: Sulfonamide therapy may be associated with headache, nausea, vomiting, urticaria, diarrhea, hepatitis, pancreatitis, blood dyscrasias, neuropathy, drug fever, skin rash, injection of the conjunctiva and sclera, petechiae, purpura, hematuria and crystalluria.

Side effects due to erythromycin are infrequent, but occasional abdominal discomfort, nausea, or vomiting, urticaria and other skin rashes may occur.

Supplied: The Granules for Oral Suspension come in bottles of 60 ml. and 150 ml. The Chewable tablets are in bottles of 50. Each 5-ml. teaspoonful of reconstituted Granules or each Chewable tablet provides erythromycin ethyl succinate equivalent to 125 mg. of erythromycin activity and 167 mg. of each of sulfadiazine, sulfamerazine and sulfamethazine. 701358

ABBOTT

The relief received from the first Trocinate 400 mg. tablet is so prompt that the discomfort of diarrhea ceases to be a bother. May be repeated every four hours.

Upon request, a supply of Trocinate 400 mg. with literature will be sent to physicians for their personal use.

WM. P. POYTHRESS & CO., INC.
RICHMOND, VIRGINIA 23217
Manufacturers of ethical pharmaceuticals since 1856

Diarrhea
TROCINATE® 400 MG.
BRAND THIPHENAMIL HCl.

If there's a broader susceptibility pattern of organisms, we've yet to see it.

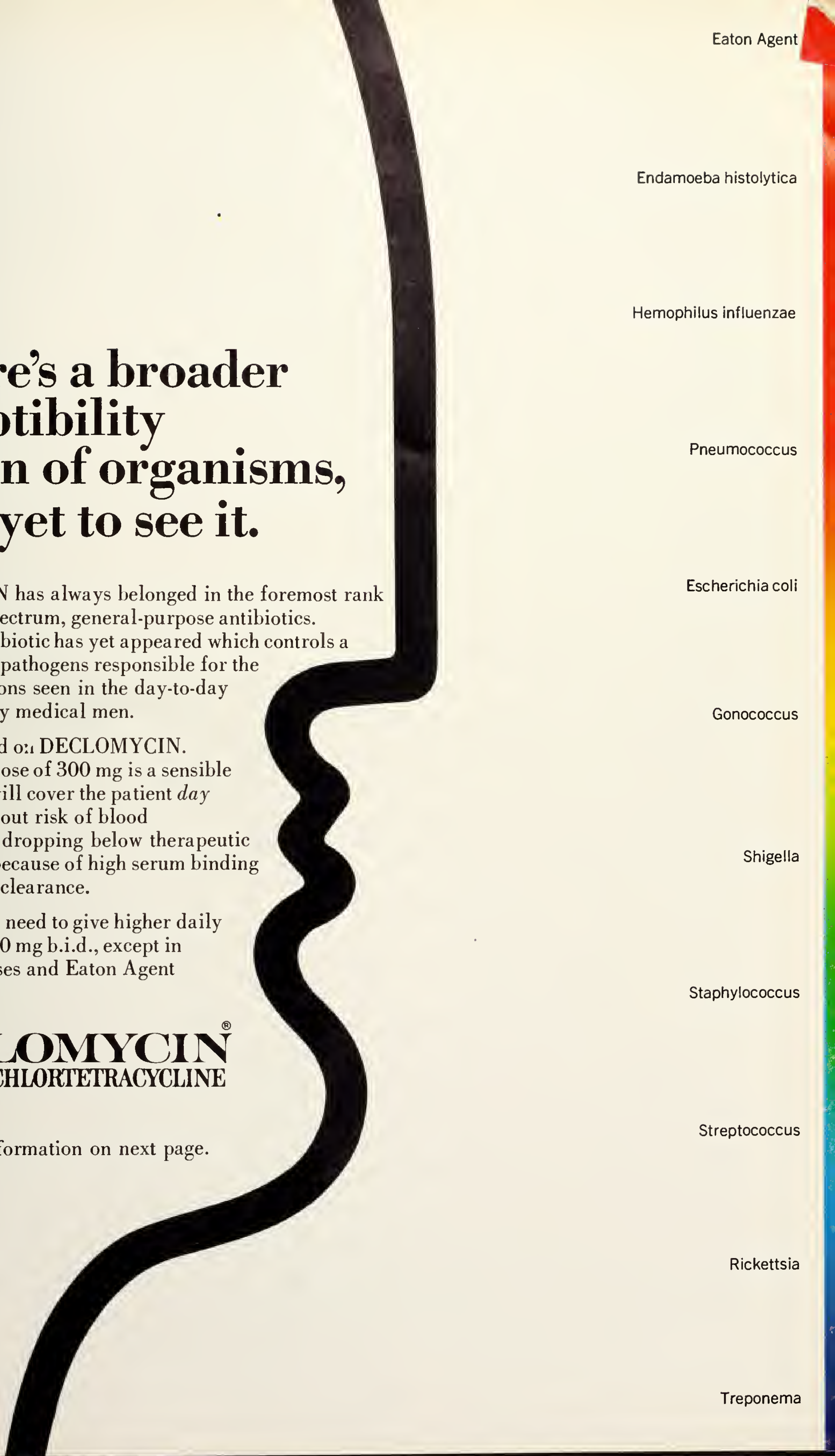
DECLOMYCIN has always belonged in the foremost rank of the broad-spectrum, general-purpose antibiotics. Indeed, no antibiotic has yet appeared which controls a wider range of pathogens responsible for the clinical infections seen in the day-to-day practice of busy medical men.

You can depend on DECLOMYCIN. A twice-daily dose of 300 mg is a sensible schedule that will cover the patient *day and night,* without risk of blood concentrations dropping below therapeutic levels. This is because of high serum binding and slow renal clearance.

And there is no need to give higher daily dosage than 300 mg b.i.d., except in venereal diseases and Eaton Agent pneumonia.

DECLOMYCIN®
DEMETHYLCHLORTETRACYCLINE
Lederle

Prescribing information on next page.



Eaton Agent

Endamoeba histolytica

Hemophilus influenzae

Pneumococcus

Escherichia coli

Gonococcus

Shigella

Staphylococcus

Streptococcus

Rickettsia

Treponema

If there's a broader susceptibility pattern of organisms, we've yet to see it.

DECLOMYCIN Demethylchlortetracycline should be equally or more effective therapeutically than other tetracyclines when the offending organisms are tetracycline-sensitive.

Contraindication: History of hypersensitivity to demethylchlortetracycline.

Warning—In renal impairment, usual doses may lead to excessive accumulation and liver toxicity. Under such conditions, lower than usual doses are indicated, and, if therapy is prolonged, serum level determinations may be advisable. A photodynamic reaction to natural or artificial sunlight has been observed. Small amounts of drug and short exposure may produce an exaggerated sunburn reaction which may range from erythema to severe skin manifestations. In a smaller proportion, photoallergic reactions have been reported. Patients should avoid direct exposure to sunlight and discontinue drug at the first evidence of skin discomfort. Necessary subsequent courses of treatment with tetracyclines should be carefully observed.

Precautions—Overgrowth of nonsusceptible organisms may occure. Constant observation is essential. If new infections appear, appropriate measures should be taken. In infants, increased intracranial pressure with bulging fontanels has been observed. All signs and symptoms have disappeared rapidly upon cessation of treatment.

Side Effects—Gastrointestinal system—anorexia, nausea, vomiting, diarrhea, stomatitis, glossitis, enterocolitis, pruritus ani. Skin—maculopapular and erythematous rashes. A rare case of exfoliative dermatitis has been reported. Photosensitivity; onycholysis and discoloration of the nails (rare). Kidney—rise in BUN, apparently dose related. Transient increase in urinary output, sometimes accompanied by thirst (rare). Hypersensitivity reactions—urticaria, angioneurotic edema, anaphylaxis. Teeth— dental staining (yellow-brown) in children of mothers given this drug during the latter half of pregnancy, and in children given the drug during the neonatal period, infancy and early childhood. Enamel hypoplasia has been seen in a few children. If adverse reaction or idiosyncrasy occurs discontinue medication and institute appropriate therapy.

Average Adult Daily Dosage: 150 mg q.i.d. or 300 mg b.i.d. Should be given 1 hour before or 2 hours after meals, since absorption is impaired by the concomitant administration of high calcium content drugs, foods and some dairy products. Treatment of streptococcal infections should continue for 10 days, even though symptoms have subsided.

In the treatment of syphilis a dosage schedule of a total of 12 to 18 Gm. given in equally divided doses over a period of 10 to 15 days should be followed. Close follow-up observation of the patient is recommended, including appropriate laboratory tests, since demethylchlortetracycline has not had adequate evaluation in all stages of syphilis. Spinal fluid examination should be included as part of this follow-up.

Acute gonococcal anterior urethritis in males has been treated effectively with a single dose of 600-900 mg. of DECLOMYCIN Demethylchlortetracycline. Individuals unable to tolerate large single doses due to gastrointestinal side effects may be treated with 150 mg. every 6 hours for a minimum of 4 doses or 300 mg. every 12 hours for a minimum of 2 doses. Females should be treated with a dosage of 150 mg. every 6 hours or 300 mg. every 12 hours until a cure is affected. Primary Atypical Pneumonia (Eaton Agent): The average adult daily dosage is 900 mg. in 3 divided doses for six days.

LEDERLE LABORATORIES, A Division of
American Cyanamid Company, Pearl River, N.Y.

Lederle

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Richmond, Virginia
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tear, moisten, compare—that's all!

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The Journal
of the
South Carolina Medical Association

VOLUME 63 DECEMBER, 1967 NUMBER 12

A SIMPLE METHOD TO DETECT SMOKING SENSITIVITY

J. MANLY STALLWORTH, M.D.**
AKRAM NAJIB, M.D.†
ANTONIO RAMIREZ, M.D.‡

Introduction:

All patients do not respond equally to the effects of smoking cigarettes. In an effort to determine which patients are hypersensitive, this study was established.

Historically, smoking of tobacco leaves is an old custom first known to be employed by the primitive American inhabitants. It is believed that the Arizona Indians smoked a kind of preparation full of tobacco leaves as early as 1200 A.D. The custom was observed by Columbus when he came to San Salvador in 1492. When the conquerors returned to Spain, they carried with them the leaf and the custom of smoking and chewing it. Gradually, the use of tobacco spread throughout Europe. The sophisticated form of preparing and smoking cigarettes and cigars was developed in Europe, especially in France, and was brought back to America by the new world settlers during the eighteenth century.

Tobacco smoking was a symbol of peace in the new world, as demonstrated by the smoking of the traditional "peace pipe" in Indian ceremonies. When the white man arrived, tobacco became as valuable as money. General George Washington said, when pleading for campaign funds in 1776, "If you can't send money, send tobacco." More recently, General John J. Pershing wrote, during World War I, "Tobacco is as necessary as food. We need a thousand pounds at once."

Since the 19th century, the close relationship between the use of tobacco and some vascular diseases has been observed. The effects of prolonged use of tobacco on the heart and vascular system have been recorded, and nicotine has been found to be the most important agent in these effects. In spite of the fact that cigarette smoking has been found to be closely related to the incidence of carcinoma of the lung[1] and diseases of the vascular systems, the consumption of tobacco has increased from 2,334 billion pieces in 1961 to 2,466 billion pieces in 1963 according to a report by the U. S. Department of Agriculture. Each year, around 70 million Americans buy more than 523 billion cigarettes, 7.1 billion cigars, 69.5 million pounds of smoking tobacco, and 64.8 million pounds of chewing tobacco.

When a cigarette is smoked, 35% of the nicotine is destroyed in the burning

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*Supported by the John A. Hartford Foundation, Roper Hospital, Charleston, South Carolina.

**Departments of Surgery, Medical College of South Carolina and Roper Hospital, Charleston, South Carolina.

†Now at Medical College of Mosul, Mosul, Iraq.

‡On temporary leave of absence from the Department of Surgery, University of Javeriana, Bogota, Columbia.

process, 35% is lost in the side stream of smoke, 22% is absorbed in the body, and 8% remains in the unsmoked portion of the cigarette.[2,3] The standard cigarette weighs 1 gram and contains 20 mg of nicotine, thus it is estimated that a smoker absorbs about 2.5 to 3.5 mg of nicotine from one cigarette.[4] There is a wide variation in the susceptibility to nicotine and cigarette smoking among various persons,[5] or even in the same person. These variations may be due to the extensive action of nicotine, not only in the autonomic ganglia, both sympathetic (heart,[6,7] blood vessels,[8] pupils) and parasympathetic ganglia (salivary gland, gastrointestinal glands), but also in the adrenal medulla,[9,10] neuromuscular junctions, central nervous system, lungs,[1] and in the metabolism of the lipids.[11]

Cardiac output increases up to 200% over control values[12,13] during the inhalation of tobacco smoke, whether from cigarette or pipe. There is similar increase with an intravenous injection of nicotine. Parallel with this increase, there is an increase in the systolic blood pressure, probably due to increased peripheral resistance. Skin temperatures decrease due to vasoconstriction during smoking.[4] The cardiac output begins to return to control values in 10 to 15 minutes after cessation of smoking. The changes described are not as marked when the smoke is not inhaled,[12] or similarly when the nicotine is not injected.

Kershbaum and Bellet[14] observed an increase in the free fatty acids in human volunteers when smoking and in dogs when injected with nicotine. Swartz and Lellouch[15] found significant increase in cholesterol levels and in Beta lipoproteins in patients who inhaled cigarette smoke.

Lord[16] stated (figure 1) that heavy cigarette smoking may favor atherogenesis, by (1) tobacco hypersensitivity with the arterial wall as a target organ, by (2) altering the clotting-fibrinolytic balance by shortening platelet survival, by (3) elevation of the free fatty acids, and by (4) lowering the lateral wall pressure associated with increased velocity of blood flow.[12,16,18] Smoking in humans and nicotine injection in dogs changes the normal pattern of some aspects of lipid metabolism. Therefore, these facts may have etiological significance in atherogenesis. In spite of these facts, and according to Swartz and Lellouch[15] more evidence is necessary to incriminate cigarette smoking as a direct cause of atherosclerosis.

The pros and cons of smoking continue. The interest in the problem in this laboratory arose following the inevitable question of the smoker with vascular complaints, "Must I give up smoking?" Preliminary studies of normal medical students established that subjects vary in their immediate response to the stimulus of smoking. The established relationship of systemic response to nicotine has been documented. The hypersensitivity

Figure 1.

FOUR PATHWAYS WHEREIN HEAVY CIGARETTE SMOKING
MAY OPERATE TO AUGMENT ATHEROSCLEROTIC PLAQUE[16]

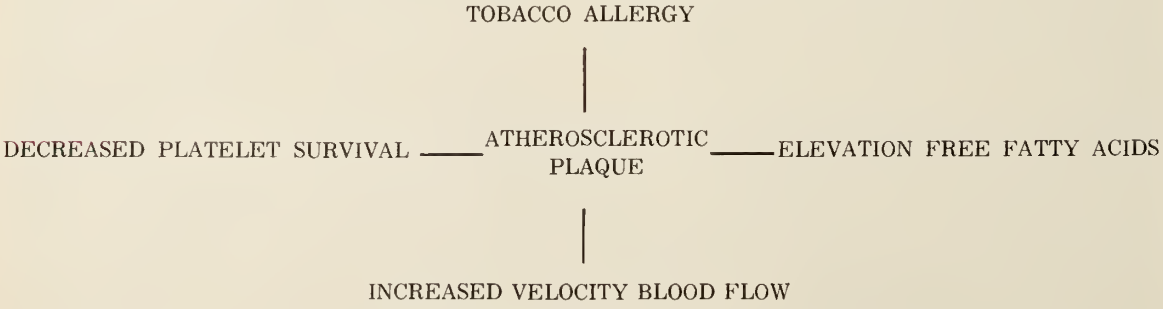
TOBACCO ALLERGY
DECREASED PLATELET SURVIVAL
ATHEROSCLEROTIC PLAQUE
ELEVATION FREE FATTY ACIDS
INCREASED VELOCITY BLOOD FLOW

Figure 2.

INCIDENCE OF AGE AND SEX

Group	Disease	Patients	Male	Female	Age
I	Normal	19	16	3	24-70
II	Localized arterial obstruction	17	15	2	38-79
III	Diffuse arterial obstruction	13	12	1	34-66
IV	Raynaud's Disease	6	1	5	33-59
V	Buerger's Disease	8	8	0	29-46
VI	Vasospasm (? etiology)	10	9	1	30-64
VII	Frostbite	2	2	0	35
VIII	Polycythemia	1	1	0	35
	Totals	76	64	12	42 yrs. (Average)

effects, however, have not been clarified. Thus a program was designed to record simple reactions to smoking on patients with various types of vascular disease.

Procedure:

The study was carried out on 76 habitual smokers who were having routine vascular studies as a part of their hospital evaluation. For the purpose of this report, these patients were classified according to their final hospital diagnoses (see figure 2). There were 17 patients studied with major localized arterial obstruction, 13 patients with relative diffuse arterial insufficiency, six patients with Raynaud's disease, eight with Buerger's disease, ten patients with vasospasm of unknown etiology, two with frostbite, one with polycythemia, and 19 normal patients, who after vascular evaluation were found to have no peripheral vascular disease. The age incidence was between 24 and 79 years, and there were 64 males and 12 females; all except two patients were Caucasian.

The patient was placed at bed rest in a constant temperature (70°F) constant humidity (50%) environment for 30 to 45 minutes, had not smoked for at least 12 hours before the study, and had only a light breakfast without caffeine. The control studies included electrocardiography, pulse rate, blood pressure, oscillometry, digital plethysmography, and digital skin temperature. The patient was allowed two inhalations after lighting a cigarette of his choice, waited five minutes, and had two more deep inhalations. The pulse rate and blood pressure were recorded every five minutes for 30 minutes, at which time all studies mentioned were repeated. The entire procedure required two hours.

Results:

The effects of smoking four puffs of a cigarette on pulse rate, blood pressure, skin temperatures, oscillometric and plethysmographic measurements are shown as averages for each group in figure 3. The figures used to indicate average increase or decrease in pulse rate and blood pressure after smoking were the highest recorded on each patient since these indices were recorded at five minute intervals following inhalation of tobacco smoke.

In Group I (19 normal subjects) there was an average increase in pulse rate after smoking of 9.5/min and average increase in blood pressure of 11.4 mm/Hg. and average decrease in skin temperature of 3.5°F and decreases in oscillometric indices of 0.7 and in plethysmographic records of 1.0.

In Group II (17 patients with localized arterial obstruction) there was an average increase in pulse rate of 8.1/min. an increase of 9.8 mm/Hg. in blood pressure, a decrease of 2.2° in digital temperature, and minimal (0.5) decreases in both oscillometric and plethysmographic recordings.

In Group III (13 patients with diffuse arterial obstruction) the pulse increased an average of 7.5/min., the blood pressure increased 3.88 mm/Hg, skin temperatures showed an average of 2.0° decrease, oscillometric indices averaged 0.9 decrease, and plethysmographic recordings averaged 0.7 decrease after smoking.

Group IV (6 patients with Raynaud's disease) showed an average increase of 8.5/min. in pulse rate after smoking, an average of 9.5 mm Hg increase in blood pressure, and *increase* in skin temperature of 3.7° and minimal increases in oscillometric indices (0.3) and plethysmographic recordings (0.5).

Group V (8 patients with Buerger's disease) showed an average increase of 8/min. in pulse rate, an increase of 7 mm/Hg in blood pressure, an increase of 0.1° in skin temperature and decreases of 0.4 in oscillometric indices and 0.6 in plethysmographic recordings.

Group VI (10 patients with vasospasm of unknown etiology) showed an average increase in pulse rate of 6.6/min., an average of 6.8 mm/Hg. in blood pressure, a decrease of 3.9° skin temperature, minimal (0.2) decrease in oscillometry and no change in plethysmography.

Group VII (2 patients with frostbite) showed an average increase of 6/min. in pulse rate, 6 mm/Hg. increase in blood pressure, a decrease of 3.5° skin temperature, a decrease of 3.5 in oscillometric indices and an increase of 0.5 in plethysmographic recordings.

The one patient with polycythemia showed an increase of 16/min. pulse rate, an increase of 10 mm/Hg. in blood pressure and an increase of 6° skin temperature, and no changes in oscillometric index tracings or in plethysmographic recordings.

Changes in all groups are shown as percentage in figure 3. There was an increase in pulse rate in 76% of the patients, while 70% of the patients showed an increase in blood pressure and 74% of the patients had decreased skin temperature. Oscillometric decreases were shown in 31% of the total patients. There were striking examples in patients of all groups where there was no response to this limited smoking process (4 inhalations) as seen in figure 4.

Discussion

Much has been written in recent years concerning the various effects of tobacco on the cardiovascular system, as well as the possible relationship of the use of tobacco to future cardiovascular disease. This study presents a comparison of the responses of individual patients after four inhalations of a cigarette using several recording diagnostic methods to evaluate the effects of cigarette smoking. In this study of patients with peripheral vascular disease, elevations in blood pressure, pulse rate, and decreases in skin temperatures after smoking were predominant. However, there were many patients who showed little or no effects. This group was believed to be non-sensitive to the effects of small amounts of smoke.

Wright and Moffatt[19] conducted 135 experiments with normal persons using standard brand cigarettes, and measuring

Figure 3.
AVERAGE CHANGE IN MEASUREMENTS

Group	Disease	No. Pts.	Pulse per min.	B/P mm/Hg	Skin Temp. degrees F.	Oscill. mm.	Plethys. mm.
I	Normal	19	↑ 9.5	↑ 11.4	↓ 3.5	↓ .7	↓ 1.0
II	Localized arterial obstruction	17	↑ 8.1	↑ 9.8	↓ 2.2	↓ .5	↓ .5
III	Diffuse arterial obstruction	13	↑ 7.5	↑ 3.8	↓ 2.0	↓ .9	↓ .7
IV	Raynaud's disease	6	↑ 8.5	↑ 9.5	↑ 3.7	↑ .3	↑ .5
V	Buerger's disease	8	↑ 8.0	↑ 7.0	↑ .1	↓ .4	↓ .6
VI	Vasospasm (etiology ?)	10	↑ 6.6	↑ 6.8	↓ 3.9	↓ .2	.0
VII	Frostbite	2	↑ 6.0	↑ 6.0	↓ 3.5	↓ 3.5	↑ .5
VIII	Polycythemia	1	↑ 16.0	↑ 10.0	↑ 6.0	.0	.0
Percent change all groups			↑ 76%	↑ 70%	↓ 74%	↓ 38%	↓ 31%

Figure 4.
VARIATIONS OF SMOKING STUDIES

Group	Disease	No. Pts.	Pulse			Blood Pressure			Skin Temp.			Oscillometry			Plethysmography		
			↑	↓	no chg	↑	↓	no chg	↑	↓	no chg	↑	↓	no chg	↑	↓	no chg
I	Normal	19	16	3	0	13	1	5	2	16	1	8	6	5	2	5	12
II	Localized arterial obstruction	17	15	0	2	14	2	1	0	14	3	0	8	9	0	8	9
III	Diffuse arterial obstruction	13	9	0	4	8	2	3	0	10	3	0	8	5	0	5	8
IV	Raynaud's disease	6	5	1	0	5	0	1	4	0	2	2	0	4	2	0	4
V	Buerger's disease	8	5	1	2	4	0	4	3	5	0	0	4	4	1	2	5
VI	Vasospasm (etiology ?)	10	7	0	3	7	1	2	0	9	1	0	1	9	1	3	6
VII	Frostbite	2	1	0	1	1	0	1	0	2	0	0	2	0	1	1	0
VIII	Polycythemia	1	1	0	0	1	0	0	1	0	0	0	0	1	0	0	1
	Totals	76	59	5	12	53	16	17	10	56	10	10	29	31	7	24	45

changes in skin temperature found that there was a drop of an average of 5.3°F. Roth et al[20] were able to measure skin temperatures in the digits and demonstrate a similar drop. Lampson[21] and Friedell[8] and others[19,22] showed a precipitous drop in blood flow using plethysmographic techniques.

In this study, 19 normal patients, (Group I) between the ages of 24 to 70 years of age, 16 had increase in pulse rate (averaging 9.5 per minute) 13 had increase in blood pressure (averaging 11.4 mm/Hg.) while 16 had an average of 3.5°F decrease in skin temperature (see figure 4). This is believed to represent hypersensitivity response since the exposure to smoke was extremely limited.

Juergens et al[23] found that when the follow-up period was sufficient, non-diabetic patients with arteriosclerotic disease who continued to smoke suffered 10% chance of subsequent amputation, while none of the non-smokers was so penalized. Accordingly, he concluded that cigarette smoking should be prohibited in patients with arteriosclerotic disease.

In our Groups II and III, 30 patients with localized and diffuse arteriosclerosis, 25 patients had decrease in skin temperature, (averaging 2°F). All had increased blood pressure (averaging 6.8 mm/Hg.) and increased pulse rate (averaging 7.8 per minute). There was a decrease from 0.5 to 1 mm in plethysmographic and oscillometric indices. These figures suggest either vasospasm in the collateral blood vessels or the expected physiological response recorded elsewhere. This group of patients were consistent in their responses (see figure 4).

Schirger and Shick[24] advised that patients with Raynaud's disease and Raynaud's phenomenon should abstain from the use of tobacco during symptomatic periods. They added it would seem unreasonable for patients who rarely experience a vasospastic episode, perhaps during extremely cold weather, to abstain from smoking. Our studies in this small number of patients with Raynaud's disease (Group IV) do not indicate that smoking is harmful. In this study, the patients with Raynaud's disease showed an increase in blood pressure, (9.5 mm Hg. average) increase in pulse rate (averaging 8.5 per minute), yet the skin temperature was *increased* in four patients and no change occurred in two (averaging an *increase* of 3.2°F). No changes were demonstrated in the oscillometric or plethysmographic studies (see figure 4).

McDivitt and Wright[25] stated that in 25 years experience in large vascular clinics, they had observed that thromboangitis obliterans rarely becomes or remains quiescent and that gangrene or ulcers will continue indolent or progress adversely, as long as the patient continues to smoke even occasionally. In Group VI, ten patients with vasospasm of unknown

Figure 5.

SENSITIVITY REACTION OF PATIENTS TO SMALL AMOUNTS OF CIGARETTE SMOKE

All Patients	Pulse	B/P	Skin Temp.	Oscill.	Plethys.
	↑ 76%	↑ 70%	↓ 74%	↓ 38%	↓ 31%

etiology, the majority had increased pulse rate and blood pressure and decreased skin temperature (figure 4).

In Groups VII and VIII, those with frostbite and polycythemia, there were too few patients to draw any conclusions.

Conclusion:

A study of the sensitivity of smoking after four inhalations, among 57 patients with varieties of vascular disorders and in 19 patients without abnormalities, is reported. While many studies, including electrocardiography, oscillometry, digital plethysmography, etc. were carried out, the patient with tobacco sensitivity showed the effects of smoking mainly as increased blood pressure and pulse rate and decreased skin temperatures (figure 5). Many patients showed no effects to this quantity of smoke and thus are thought to be nonsensitive to traces of smoke contents.

Accordingly, it seems that a simple clinical observation is available to all patients with smoking habits. If the patient, at basic metabolic conditions, having abstained from smoking for 12 hours, is observed via blood pressure, pulse rate, and when possible, peripheral skin temperatures, before and at five minute intervals after inhalation of smoke, a reasonable accounting of his reaction to smoking can be demonstrated.

It appears significant that all patients do not respond to the effects of smoking in a measurable pattern. Therefore, it seems that when the question arises as to the continuation or abstinence of smoking, a simple observation as suggested will give conclusive evidence of smoking sensitivity as related to each patient's cardiovascular system.

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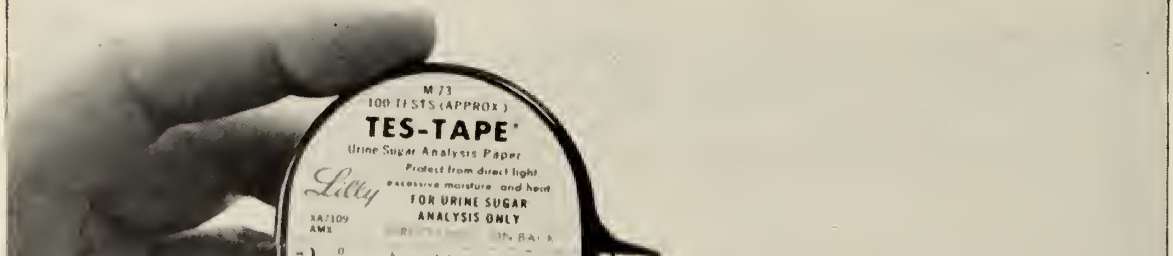
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A SIMPLE METHOD TO DETECT SMOKING SENSITIVITY

J. MANLY STALLWORTH, M.D.**
AKRAM NAJIB, M.D.†
ANTONIO RAMIREZ, M.D.‡

Introduction:

All patients do not respond equally to the effects of smoking cigarettes. In an effort to determine which patients are hypersensitive, this study was established.

Historically, smoking of tobacco leaves is an old custom first known to be employed by the primitive American inhabitants. It is believed that the Arizona Indians smoked a kind of preparation full of tobacco leaves as early as 1200 A.D. The custom was observed by Columbus when he came to San Salvador in 1492. When the conquerors returned to Spain, they carried with them the leaf and the custom of smoking and chewing it. Gradually, the use of tobacco spread throughout Europe. The sophisticated form of preparing and smoking cigarettes and cigars was developed in Europe, especially in France, and was brought back to America by the new world settlers during the eighteenth century.

Tobacco smoking was a symbol of peace in the new world, as demonstrated by the smoking of the traditional "peace pipe" in Indian ceremonies. When the white man arrived, tobacco became as valuable as money. General George Washington said, when pleading for campaign funds in 1776, "If you can't send money, send tobacco." More recently, General John J. Pershing wrote, during World War I, "Tobacco is as necessary as food. We need a thousand pounds at once."

Since the 19th century, the close relationship between the use of tobacco and some vascular diseases has been observed. The effects of prolonged use of tobacco on the heart and vascular system have been recorded, and nicotine has been found to be the most important agent in these effects. In spite of the fact that cigarette smoking has been found to be closely related to the incidence of carcinoma of the lung[1] and diseases of the vascular systems, the consumption of tobacco has increased from 2,334 billion pieces in 1961 to 2,466 billion pieces in 1963 according to a report by the U. S. Department of Agriculture. Each year, around 70 million Americans buy more than 523 billion cigarettes, 7.1 billion cigars, 69.5 million pounds of smoking tobacco, and 64.8 million pounds of chewing tobacco.

When a cigarette is smoked, 35% of the nicotine is destroyed in the burning process. 35% is lost in the side stream of smoke, 22% is absorbed in the body, and 8% remains in the unsmoked portion of the cigarette.[2,3] The standard cigarette weighs 1 gram and contains 20 mg of nicotine, thus it is estimated that a smoker absorbs about 2.5 to 3.5 mg of nicotine from one cigarette.[4] There is a wide variation in the susceptibility to nicotine and cigarette smoking among various persons,[5] or even in the same person. These variations may be due to the extensive action of nicotine, not only in the autonomic ganglia, both sympathetic (heart,[6,7] blood vessels,[8] pupils) and parasympathetic ganglia (salivary gland, gastrointestinal glands), but also in the adrenal medulla,[9,10] neuromuscular junctions, central nervous system, lungs,[1] and in the metabolism of the lipids.[11]

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Cardiac output increases up to 200% over control values[12,13] during the inhalation of tobacco smoke, whether from cigarette or pipe. There is similar increase with an intravenous injection of nicotine. Parallel with this increase, there is an increase in the systolic blood pressure, probably due to increased peripheral resistance. Skin temperatures decrease due to vasoconstriction during smoking.[4] The cardiac output begins to return to control values in 10 to 15 minutes after cessation of smoking. The changes described are not as marked when the smoke is not inhaled,[12] or similarly when the nicotine is not injected.

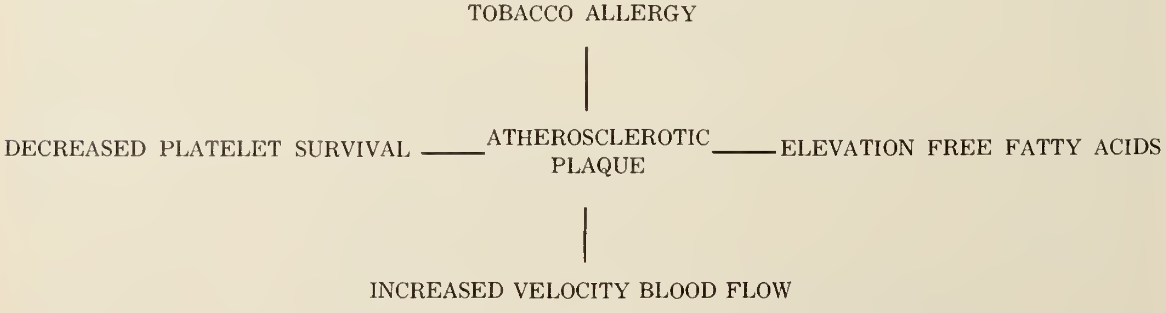
Kershbaum and Bellet[14] observed an increase in the free fatty acids in human volunteers when smoking and in dogs when injected with nicotine. Swartz and Lellouch[15] found significant increase in cholesterol levels and in Beta lipoproteins in patients who inhaled cigarette smoke.

Lord[16] stated (figure 1) that heavy cigarette smoking may favor atherogenesis, by (1) tobacco hypersensitivity with the arterial wall as a target organ, by (2) altering the clotting-fibrinolytic balance by shortening platelet survival, by (3) elevation of the free fatty acids, and by (4) lowering the lateral wall pressure associated with increased velocity of blood flow.[12,16,18] Smoking in humans and nicotine injection in dogs changes the normal pattern of some aspects of lipid metabolism. Therefore, these facts may have etiological significance in atherogenesis. In spite of these facts, and according to Swartz and Lellouch[15] more evidence is necessary to incriminate cigarette smoking as a direct cause of atherosclerosis.

The pros and cons of smoking continue. The interest in the problem in this laboratory arose following the inevitable question of the smoker with vascular complaints, "Must I give up smoking?" Preliminary studies of normal medical students established that subjects vary in their immediate response to the stimulus of smoking. The established relationship of systemic response to nicotine has been documented. The hypersensitivity

Figure 1.

FOUR PATHWAYS WHEREIN HEAVY CIGARETTE SMOKING MAY OPERATE TO AUGMENT ATHEROSCLEROTIC PLAQUE[16]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DECREASED PLATELET SURVIVAL
ATHEROSCLEROTIC PLAQUE
ELEVATION FREE FATTY ACIDS
INCREASED VELOCITY BLOOD FLOW

Figure 2.

INCIDENCE OF AGE AND SEX

Group	Disease	Patients	Male	Female	Age
I	Normal	19	16	3	24-70
II	Localized arterial obstruction	17	15	2	38-79
III	Diffuse arterial obstruction	13	12	1	34-66
IV	Raynaud's Disease	6	1	5	33-59
V	Buerger's Disease	8	8	0	29-46
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The patient was placed at bed rest in a constant temperature (70°F) constant humidity (50%) environment for 30 to 45 minutes, had not smoked for at least 12 hours before the study, and had only a light breakfast without caffeine. The control studies included electrocardiography, pulse rate, blood pressure, oscillometry, digital plethysmography, and digital skin temperature. The patient was allowed two inhalations after lighting a cigarette of his choice, waited five minutes, and had two more deep inhalations. The pulse rate and blood pressure were recorded every five minutes for 30 minutes, at which time all studies mentioned were repeated. The entire procedure required two hours.

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Group V (8 patients with Buerger's disease) showed an average increase of 8 min. in pulse rate, an increase of 7 mm Hg in blood pressure, an increase of 0.1° in skin temperature and decreases of 0.4 in oscillometric indices and 0.6 in plethysmographic recordings.

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Group VII (2 patients with frostbite) showed an average increase of 6 min. in pulse rate, 6 mm/Hg. increase in blood pressure, a decrease of 3.5° skin temperature, a decrease of 3.5 in oscillometric indices and an increase of 0.5 in plethysmographic recordings.

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I	Normal	19	16	3	0	13	1	5	2	16	1	8	6	5	2	5	12
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VII	Frostbite	2	1	0	1	1	0	1	0	2	0	0	2	0	1	1	0
VIII	Polycythemia	1	1	0	0	1	0	0	1	0	0	0	0	1	0	0	1
	Totals	76	59	5	12	53	16	17	10	56	10	10	29	31	7	24	45

changes in skin temperature found that there was a drop of an average of 5.3°F. Roth et al[20] were able to measure skin temperatures in the digits and demonstrate a similar drop. Lampson[21] and Friedell[8] and others[19,22] showed a precipitous drop in blood flow using plethysmographic techniques.

In this study, 19 normal patients, (Group I) between the ages of 24 to 70 years of age, 16 had increase in pulse rate (averaging 9.5 per minute) 13 had increase in blood pressure (averaging 11.4 mm/Hg.) while 16 had an average of 3.5°F decrease in skin temperature (see figure 4). This is believed to represent hypersensitivity response since the exposure to smoke was extremely limited.

Juergens et al[23] found that when the follow-up period was sufficient, non-diabetic patients with arteriosclerotic disease who continued to smoke suffered 10% chance of subsequent amputation, while none of the non-smokers was so penalized. Accordingly, he concluded that cigarette smoking should be prohibited in patients with arteriosclerotic disease.

In our Groups II and III, 30 patients with localized and diffuse arteriosclerosis, 25 patients had decrease in skin temperature, (averaging 2°F). All had increased blood pressure (averaging 6.8 mm/Hg.) and increased pulse rate (averaging 7.8 per minute). There was a decrease from 0.5 to 1 mm in plethysmographic and oscillometric indices. These figures suggest either vasospasm in the collateral blood vessels or the expected physiological response recorded elsewhere. This group of patients were consistent in their responses (see figure 4).

Schirger and Shick[24] advised that patients with Raynaud's disease and Raynaud's phenomenon should abstain from the use of tobacco during symptomatic periods. They added it would seem unreasonable for patients who rarely experience a vasospastic episode, perhaps during extremely cold weather, to abstain from smoking. Our studies in this small number of patients with Raynaud's disease (Group IV) do not indicate that smoking is harmful. In this study, the patients with Raynaud's disease showed an increase in blood pressure, (9.5 mm/Hg. average) increase in pulse rate (averaging 8.5 per minute), yet the skin temperature was *increased* in four patients and no change occurred in two (averaging an *increase* of 3.2°F). No changes were demonstrated in the oscillometric or plethysmographic studies (see figure 4).

McDivitt and Wright[25] stated that in 25 years experience in large vascular clinics, they had observed that thromboangitis obliterans rarely becomes or remains quiescent and that gangrene or ulcers will continue indolent or progress adversely, as long as the patient continues to smoke even occasionally. In Group VI, ten patients with vasospasm of unknown

Figure 5.

SENSITIVITY REACTION OF PATIENTS TO SMALL AMOUNTS OF CIGARETTE SMOKE

All Patients	Pulse	B/P	Skin Temp.	Oscill.	Plethys.
	↑ 76%	↑ 70%	↓ 74%	↓ 38%	↓ 31%

etiology, the majority had increased pulse rate and blood pressure and decreased skin temperature (figure 4).

In Groups VII and VIII, those with frostbite and polycythemia, there were too few patients to draw any conclusions.

Conclusion:

A study of the sensitivity of smoking after four inhalations, among 57 patients with varieties of vascular disorders and in 19 patients without abnormalities, is reported. While many studies, including electrocardiography, oscillometry, digital plethysmography, etc. were carried out, the patient with tobacco sensitivity showed the effects of smoking mainly as increased blood pressure and pulse rate and decreased skin temperatures (figure 5). Many patients showed no effects to this quantity of smoke and thus are thought to be nonsensitive to traces of smoke contents.

Accordingly, it seems that a simple clinical observation is available to all patients with smoking habits. If the patient, at basic metabolic conditions, having abstained from smoking for 12 hours, is observed via blood pressure, pulse rate, and when possible, peripheral skin temperatures, before and at five minute intervals after inhalation of smoke, a reasonable accounting of his reaction to smoking can be demonstrated.

It appears significant that all patients do not respond to the effects of smoking in a measurable pattern. Therefore, it seems that when the question arises as to the continuation or abstinence of smoking, a simple observation as suggested will give conclusive evidence of smoking sensitivity as related to each patient's cardiovascular system.

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CHROMOSOME ABERRATIONS INDUCED BY PLASMA FROM IRRADIATED PATIENTS*

A Brief Report

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Introduction

Radiation damage to human chromosomes is well known.[1] The present report will describe the effect of plasma from patients receiving x-ray on the chromosomes of normal, non-irradiated lymphocytes in short term cell culture. This experiment was devised to separate the direct effects of x-ray from a possible indirect, humoral effect on chromosomes.

Methods

Chromosomes were studied by a modified method of Morehead[2] with flame drying. Cell-free plasma (1.5 ml) from 6 patients x-irradiated through a variety of ports because of tumors ("irradiated plasma") was added to normal non-irradiated cells in culture. For controls, autologous or non-irradiated homologous plasma ("normal plasma") was added to the normal cells. In addition, plasma from 6 patients with comparable tumors, not yet irradiated, was used ("non-irradiated plasma").

In scoring cells, the chromatid was considered broken only if the distal fragment was displaced or misaligned. Otherwise, it was considered to be a gap. Breaks occurring in the same region of sister chromatids were classified as chromosome breaks. Dicentric and ring chromosomes were classified together with chromatid exchange figures as transformed chromosomes. Translocated chromosomes were excluded because of the difficulty in their positive identification.

Results

In cells treated with "irradiated plasma", there were more gaps than in either of the control groups. Whereas there was no difference in the frequency of chromatid breaks in the two control groups ("normal plasma," (3.6 100 cells), "non-irradiated plasma", (4.2/100 cells), the frequency of breaks was higher when "irradiated plasma" was used (10.7/100 cells). Similarly, the frequency of chromosome breaks was higher in the "irradiated plas-

(Continued on page 442)

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MEDICAL SCHOOLING IN SOUTH CAROLINA. XIV.

Objectives

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As has been related—and emphasized—in previous chapters of this narrative, the ultimate goal of the Master Plan designed for projection at the Medical College of South Carolina in the early 1940's was the development of a complete medical and health educational, service and research center, with the Medical College itself as the *hub*. It has also been unequivocally related that the crucial test of the entire venture would be in securing a teaching hospital under ownership operation by and for the institution. Even with the all-out effort exerted to reach this decisive initial objective, it took three years to assure success and eight more years to bring the Medical College Hospital into operation.

The principles involved in the Plan were considered fundamental—and they still are. The particulars concerned in the activating Expansion Program were recognized as subject to conditions for the most part not entirely under control; at each step of progress opportunity had to be secured—timing of the moves was of the essence.

For instance, the idea of bringing a veterans administration hospital here was merely a desire at first; it did not become even a hope until 1947, nor a possibility until 1955, a certainty until 1960, nor an established reality until 1966.

Furthermore, it could not be foreseen in 1944 that the Roper Hospital would abandon the role for which it was founded, that of providing hospitalization for the "pauper sick," to become strictly a private hospital for white patients in 1959. That occurrence compelled the Medical College Hospital to absorb these publicly supported medically indigent patients until the Charleston County Hospital could be constructed and readied for that purpose in 1965-66.

Moreover, that complicated series of events, coupled with a new federal law—and the regulations concerning it—resulted in disassociation of the Roper Hospital from the Medical College program for the first time in over fifty years. Arbitrary ruling required that even sick people must be "racially mixed"—regardless of whether it may be harmful to them—if their quarters or any service given them receives any public support.

One of the effects of this unfortunate development is already felt in the faculty; the long-term results are incalculable as of now. Although one of the intermediate objectives of the Plan was the development of a complete full-time faculty, i.e., a basic staff in all departments, employed on salaries, not in private outside practice but privileged to accept referral practice within the institution, it contemplated that this faculty system would continue to be complemented by an eminently important contingent of selected private practitioners. It is still a firm belief that such a composition of clinical staff-faculty is best for the Medical College of South Carolina, as a state-sup-

Medical College of South Carolina, circa 1854.

ported institution expected to produce medical personnel for the people's service.

By 1960 the basic organization of a full-time faculty had been completed, with an increase to about threefold of the number in position in 1944. The increase was largely in the clinical departments, where there were only three full-time members in 1944, and none before 1937. Further additions have now been recruited to a total of 99 of the rank of instructor and above in the 1965-66 term. Even this number is not enough if comparisons (sometimes invidious) may be drawn with nationally reported figures. It is certainly not enough if student enrollment shall be further increased, nor if there shall be a lessening of participation by the private practitioner contingent. There has already appeared a trend in that direction; private practitioners desirable for a clinical faculty membership are frequently too busy to devote proper attention and the scheduled time required in worthy medical teaching, while administrators of medical school departments are too busy to manage teaching programs not subject to strict scheduling and full devotion. With the disassociation of the Roper Hospital, the trend may be given impetus, in which both of the long-associated parties stand to lose something of their birthright.

In the triad of supports on which medical schooling rests, the *educational* process must reside within the institutional organization itself. While the attending *service* given is essential in that process—to a degree beyond any other comparable academic course—it is in a way incidental. But, to it are tied the purse strings of opportunity. After all, the endowment of a state medical college is held by the people; it is to be dispensed for the service they want. Success in accomplishment of the primary structure of the medical center as it exists today was based principally upon the promise of "more doctors" to serve the people. Success in the expansion of that structure which is now getting under way is dependent upon the same promise—more physicians, dentists, nurses, and others of the spreading variety of service personnel required in medical and health practices and improvements. Even private endowments, such as the three bequests received by the Medical College in the late 1950's—and the only ones bestowed here up to that time—were given at the height of its popularity for service.

Medical College of South Carolina, 1914.

The strength of the third prop, *research*, has come into general realization only recently, and even that has a utilitarian front. To most people the term research carries no further meaning than improvement of something to make it more useful; in medicine that means development of materials, methods, techniques, measures, for improvement of health and medical care—applied research. Relatively few understand the phrase *basic research*—search for knowledge for its own sake. Nor do many except true scientists take into account the fact that applied research comes to a halt when the boundaries of fundamental knowledge are reached. Prior to the 20th century medical research in this country was practically limited to the speculative or empiric type—mostly theorizing from practical observations, following the injunction to "observe, reflect and record." (Sir William Osler)

Until very recently there was no direct or specific support of medical research at the Medical College. Indulgence in such an urge—if indeed it were possessed—required that the researcher himself provide the entire outlay in cost, time and assistance. The conditions were not much more encouraging at many medical schools, even though the dictum "publish or perish" had become prevalent.

While that situation had improved a great deal at the turn into the 20th century, especially at the foremost institutions, supported by endowments and by grants from privately endowed Foundations and Funds, the massive upsurge in medical research of the present was produced by federal subsidization through the National Institutes of Health and other federal agencies and services.

The first two of such grants-in-aid ever awarded to a faculty member of the Medical College were received in the Department of Pathology in 1948 in support of studies in the association of cancer of the lung with exposure to certain industrial air pollutants, in which we had pioneered. Outside grant support in that research has continued ever since, after having been carried on for about 20 years previously by personal effort alone.

Research by members of the faculty of the Medical College has steadily increased and improved in the intervening years and the institution now stands in respectable position in that regard. Outside grant support had increased to around the million dollar level annually by 1960; it stands now at about that level, plus about half as much more in training grants. The training grant program of the National Institutes of Health has expanded rapidly during the more recent years, with the purpose of ferreting out scientific career talent as well as improving specialty training.

Non-state grant-in-aid support of medical research provides faculty opportunity to carry on investigative work. It furnishes equipment, supplies, services and assistants. Originally federal grants were not expected to include salaries in regular faculty positions, but augmentation in that area is now commonly allowed, while remuneration of many special assistants as well as graduate, postgraduate and even some undergraduate students derives from that source. In addition to subsidy in operational costs of medical research projects and programs and of personnel training, there is federal grant participation in construction of research facilities as well as for educational and service purposes. One of the first grants received here paid for the construction of one story (designated for cancer research) of the four-story Laboratory-Clinic Building of 1952, while one half of the cost of construction and equipment of the separate Research Building came from a federal grant. Without the construction and equipment grant through the Federal Hospital Construction (Hill-Burton) Program it is at least doubtful that the Medical College Hospital would have been built, and that the Medical College Expansion Program would have been successful. In fact, the Medical Center as it now exists in Charleston would not be what it is except for the federal investment in it—much the largest of all—nor would there be the prospect of the further expansion and improvement that is now (1966-67) being resumed.

The situation of today—astounding as it may seem to many—could be sensed by the early 1940's, and it was forecast, although guardedly, by some medical leaders. Except for federal investment in their physical facilities for educational, service and research functions, few medical schools—if any—would be housed, equipped and staffed as they are now. Without the tide of operational money regularly flooding from the Federal Treasury—a billion or more a year designated for research, and a similar amount for education, training and planning—

The Medical College of South Carolina, 1966, and The Medical Center. Veterans Hospital in the foreground.

most medical schools, including some of the most prominent, would be left high and dry.

Whether our medical schools can catch up with the "population explosion" in replenishing the alleged national shortage of physicians, dentists, nurses and all other kinds of medical and paramedical personnel, and whether they can keep pace with the ever-expanding opportunities in improvement of health and medical care, creates in the present popular view one of the most serious questions with which the nation is now faced. In the effort to resolve it—and perhaps to take advantage of it—11 new schools have been built since 1947 and 15 more are scheduled for opening in 1972. Furthermore, many of the already existing schools have increased their medical student enrollment, and some further increase by them is expected by the 1970's. It may be reasonably calculated that the production of physicians by American medical schools together with immigration of European physicians, now at the rate of more than 1,000 a year, will just about match the figure forecast by some "experts" as the national need in that near future. The Medical College of South Carolina is a participant in that expansion; its medical student enrollment was doubled between 1945 and 1952, and it now plans a further increase of about 25% over present enrollment. This, of course, does not mean that there will necessarily be a redistribution of physicians over the nation in accordance with any arbitrary doctor-population ratio. Nor does it mean such a redistribution in South Carolina, or that South Carolina will reach a parity with New York—or California—for instance. It does not mean that every town will have a licensed physician—or several—as it used to have, nor that it will supply the desire of the people for readily available "family physicians." Medical practitioners will continue to settle where medical business is best, where living conditions suit best, and in the type of practice they most want. Only compulsion in some form will change the natural course.

In an age of problems of revolutionary calibre, inextricably involved, will medical schooling and medical practice come even more under federal government control by virtue of financial subsidy? In the "Cybernetic Revolution," as Seaborg[1] calls it, with his ideas of what that means in lessening of work time in favor of more leisure for everyone, what will be the effect on medical schooling and practice? In the entire history of *Homo sapiens*, work has remained paramount; leisure, as it is commonly abused instead of used, breeds trouble of itself.

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Chromosome Aberrations

(Continued from page 437)

ma" group (7.1/100 cells) compared with normal plasma" (0.4/100 cells) and "non-irradiated plasma" (0.9/100 cells). In the controls groups there was seen only one transformed chromosome, an exchange figure, in a culture with autologous plasma. In the "irradiated plasma" group, 3 dicentric chromosomes, 1 ring chromosome, and 1 quadriradial exchange figure were seen. Excluding gaps, 16.9% of the cells in the "irradiated plasma" group contained abnormal chromosomes, compared with 3.9% in the "non-irradiated" group and 4.1% in the "normal plasma" group. The differences between the "irradiated plasma" group and either of the other groups, when tested with X^2, was highly significant ($p<.001$). Many of the cells treated with "irradiated plasma" had clumped chromosomes and stranding among the chromosomes. This was rarely seen in the control groups.

We were able to re-study 3 of the non-irradiated tumor patients after 2 of them had received 1000 R and one, 3000 R of x-ray. Excluding gaps, there was a significant increase in the frequency of cells having aberrant chromosomes after x-ray (4.2% of cells had aberrant chromosomes before x-ray; 18.9% of cells in the post-treatment group.) Transformed cells were seen in the post-irradiation group.

Mycoplasma cultures were negative.

These data show that material which can induce or enhance chromosomal aberrations in cell culture is present in the plasma of patients who have received large doses of x-ray and thus can mimic the "direct" effect of x-ray on chromosomes. The participation of the underlying tumor in this effect was excluded when the frequency of chromosomal aberrations in the "non-irradiated plasma" group was not found to be higher than the "normal plasma" group.

It is premature at this time to speculate on the nature of the humoral factor induced by x-ray. It is not known whether the plasma material increased chromosome damage or impeded repair of a usual chromosomal breakage process by the material.

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ACTIVE MANAGEMENT OF ACUTE MYOCARDIAL INFARCTION. I.

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Introduction

Within the past 5 years treatment of acute myocardial infarction, which still is by far the leading cause of death in this country, has advanced from a traditionally rather passive approach to an *active* and, fortunately, more efficient phase. Retrospectively it now seems surprising that the problem of salvaging patients with acute myocardial infarction has received so little attention in the area of cardio-vascular investigation and training. A medical student may still graduate knowing more about the pathophysiology and treatment of the Tetralogy of Fallot than he knows about the diagnosis and treatment of coronary heart disease. It is still possible to complete all the necessary residency and fellowship requirements not only for Boards in Internal Medicine but also for Subspecialty Boards in Cardiovascular Disease without having once been the primary physician responsible for management of a patient with acute myocardial infarction! This is at least in part due to the fact that the great majority of patients with acute infarctions are treated in non-teaching hospitals.

These deficiencies have now been made apparent by the rapidly expanding body of knowledge accumulated during the 1960's in Coronary Care Units scattered throughout the country. The first units were organized in response to the development of more effective resuscitation methods by closed chest cardiac massage and electrical defibrillation. Patients' electrocardiograms were continuously monitored to detect circulatory arrest more promptly.

Rapid advance to the second stage of Coronary Care Units occurred a scant three years ago when specially trained nurses were allowed to diagnose important arrhythmias and initiate immediate electrical and intravenous drug therapy even in the absence of a physician. Now we have entered the third stage of improved care with active therapy to *prevent* catastrophic arrhythmias having preference over watchful waiting for circulatory arrest.[1]

In the 20 years prior to 1960 there were only three modest advances in treatment of acute myocardial infarction. Early chair rest followed by earlier mobilization reduced morbidity. Though still controversial, anticoagulation reduced thromboembolic complictions and vasopressors helped manage shock. Comparatively speaking, the 1960's have produced a virtual knowledge explosion which may well be the most important advance in all medical care during this decade.

In Coronary Care Units, impressive lowering of mortality rates up to 50% are being reported, and must result in saving of considerable numbers of lives when the magnitude of the problem with coronary heart disease is considered. It seems likely that all hospitals admitting patients with acute myocardial infarctions will eventually develop various types of special treatment areas for these patients.

It is at present important for physicians treating coronary patients to become knowledgeable in the new and improved methods that characterize more effective active management of these patients. Regardless of the complexity of monitoring devices or other physical attributes of a hospital unit, it is the skilled physician working more closely than ever with the specially trained nurse who has been, and will continue to be, responsible for the recent life saving advances in coronary care.

The series of articles which will follow deals with practical aspects of the active management of patients with acute myocardial infarction. Discussion will be limited to drugs which are now available for general use and procedures which can be done by trained personnel in virtually all hospitals. Topics to be covered comprise prevention and treatment of ventricular arrhythmias, treatment of A-V block, treatment of atrial arrhythmias, early diagnosis and management of congestive heart failure, diagnosis and management of shock, and basic essentials of a hospital Coronary Care Unit.

Part 1: *Prevention and Treatment of Ventricular Arrhythmias*

In acute myocardial infarction, death may be sudden, but is not unannounced.[1] Arrhythmias account for about 40% of the deaths and of these about two thirds are due to ventricular fibrillation.[1,2] Although many of the same principles apply to treatment of arrhythmias in other settings, this discussion applies specifically to ventricular arrhythmias complicating acute myocardial infarction.

Treatment of Ventricular Premature Beats

Ventricular premature beats are the most frequent significant rhythm abnormality complicating acute infarction and may be prodromata of ventricular tachycardia and ventricular fibrillation. In order to prevent the latter serious arrhythmias, therapy should be promptly initiated when ventricular premature beats display certain characteristics (Table 1).

Occurrence of ventricular premature beats early in the cardiac cycle at the *vulnerable period,* which has been demonstrated in mammalian hearts to coincide with the apex of the T wave of the electrocardiogram,[3] may provoke ventricular tachycardia and fibrillation.[4] (Fig. 1) In the experimental animal with acute myocardial infarction, as opposed to normal animals, the electrical energy of sporadic ventricular premature beats falling in the vulnerable period is sufficient to trigger repetitive bouts of arrhythmia and ventricular fibrillation.[1]

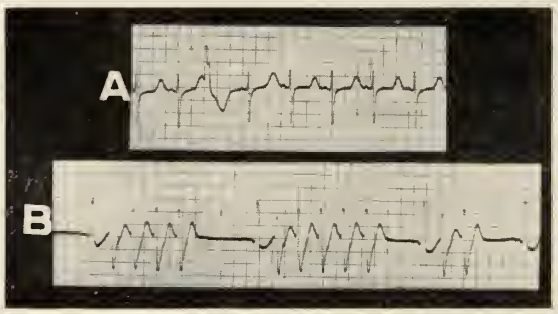
Table 1

OMINOUS VENTRICULAR PREMATURE BEATS WITH ACUTE MYOCARDIAL INFARCTION

Occurring early, near the apex of T wave of preceding beat (during vulnerable period)
Salvo of 2 or more consecutive
Multifocal (multiforme configuration)
More than 5 per minute
Bigeminal rhythm

A. Normal sinus rhythm with prolonged Q-T interval which is interrupted by a ventricular premature beat occurring near the apex of the T wave of the preceding beat.

B. Bigeminal rhythm in which each sinus beat is followed by an early ventricular premature beat superimposed on the T wave (vulnerable period) and resulting in multiple short bursts of ventricular tachycardia lasting for 2 to 5 beats at a potential ventricular rate of 168 beats per minute.



In addition to occurrence near the apex of the T wave, other ominous characteristics of ventricular premature beats in the patient with acute myocardial infarction are salvos of 2 or more, multiforme configuration (multifocal), the occurrence of more than 5 per minute, and bigeminal rhythm. Some would prefer to eliminate all ventricular premature beats in the patient with acute infarction.[2]

In Coronary Care Units, intravenous lidocaine (Xylocaine) has become the treatment of choice to suppress ventricular premature beats and represents a major innovation in therapy. A dose of 50 mg or 1 mg/Kg of lidocaine is given by rapid intravenous injection. Undiluted 2% lidocaine contains 20 mg/ml, and caution should be exercised to avoid using lidocaine with added epinephrine. Within 90 seconds to 3 minutes one will either see an effect or no result. If the first dose of 1 mg/Kg is not effective, half the initial amount may be repeated within a few minutes and 5 minutes allowed to elapse before making a further decision. The duration of action of a single intravenous rapid injection of 1 mg/Kg of lidocaine is 10 to 20 minutes.[5,6,7]

If there is a beneficial effect, a continuous intravenous infusion of from 1 to 4 mg/minute is started and may be continued for several days or much longer if necessary. Depending on individual dosage requirements for effectiveness and the need to restrict total fluid intake, various intravenous lidocaine solutions may be used. An example would be a mixture of 2000 mg of lidocaine added to 1000 ml of 5% dextrose in water to drip in at a rate of 1 ml per minute (10 to 20 drops per minute depending on the infusion set used). This would deliver 2 mg of lidocaine per minute and 1 liter of fluid over a period of 16 hours and 40 minutes.

Each ml of 2% lidocaine (Xylocaine, Astra) contains 6 mg sodium chloride. When this preparation is used to prepare a 2000 mg/liter solution, the resulting fluids contain sodium chloride 600 mg/liter (10.2 mEq/liter). In these patients in whom congestive heart failure is often a problem, the continuous infusion solutions should be made from 4 or 5% lidocaine preparations which contain almost no sodium.

It also should be noted that use of intravenous lidocaine in the manner described has not been approved by the Food and Drug Administration at the time of this writing. Therefore, the package inserts will not describe either the indications for use in treating arrhythmias or the recommended doses, side effects, or potential hazards.

Lidocaine, like procaine amide, has been shown to cause an elevation in the electrical stimulation threshold of the ventricle during diastole, and it would appear that this effect may be related to the antiarrhythmic effect of both drugs. In contrast to procaine amide it has little hypotensive effect in the effective dose range and is decidedly less toxic than any intravenous preparation of quinidine.[6] The total permissable dose has not been established, but an anesthetized adult patient has been given 500 mg within a 1 hour period without detectable signs of toxicity.[7]

Toxic reactions to sufficiently large doses of lidocaine include hypotension, sweating, vomiting, muscle twitching, confusion, convulsions, medullary depression with apnea, peripheral vasodilatation, bradycardia, atrioventricular block, and diminshed cardiac output.[8]

If lidocaine proves ineffective, procaine amide (Pronestyl) may be given intravenously in a dose of 50 mg every 2 to 3 minutes up to 1000 mg until the arrhythmia is abolished. Constant mointoring of not only the electrocardiogram but also the blood pressure is essential while procaine amide is being injected. It is best to have established a secure intravenous infusion beforehand and use a 3-way stopcock to which is already attached a bottle of intravenous fluids containing a pressor agent, such as metaraminol (Aramine), which can be dripped in immediately with a turn of the stopcock should significant hypotension occurs. If the initial dose of procaine amide is effective, it can be followed by an oral or intramuscular maintenance dose of 1 to 3 grams daily divided into 4 equal doses. Slow intravenous infusions of procaine amide with total doses of up to 6 grams a day have been used, although hypotension is a constant danger.[2]

Quinidine sulfate may be used in an oral dose of 0.2 to 0.4 grams every 2 hours for 5 doses only, or every 6 hours for longer periods. Quinidine hydrochloride or gluconate may be given intramuscularly in doses similar to the oral dose and will become effective in 5 to 15 minutes with a peak plasma level in 90 minutes as opposed to the oral peak level at 2 to 3 hours. Maintenance doses are usually 0.2 to 0.4 grams orally or intramuscularly every 6 hours. Adequate quinidine blood levels must be obtained to achieve a significant anti-arrhythmic effect, and patients vary greatly in this regard. Diminished renal function manifested by a BUN of 25 mg/100 ml or greater decreases dose requirements and high body weights increase dose requirements.[2] Because of dangerous toxic effects, intravenous quinidine should be used only in dire circumstances when other measures have failed. The intravenous dose is 0.3 to 0.5 grams dissolved in 100 ml of saline and given over 5 to 15 minutes under close electrocardiographic and blood pressure control.

Intravenous diphenylhydantoin (Dilantin) has been used successfully to control ventricular premature beats in doses of 100 to 250 mg, given within a few minutes. There may be local problems at the site of injection and toxic effects are similar to those of quinidine. Its use has largely been replaced by lidocaine.

A more indirect approach to the control of ventricular premature beats may be necessary in some patients. If significant hypotension is present, pressor therapy may abolish the arrhythmia. Treatment of congestive heart failure with digitalis or diuretics or both may control premature beats secondary to inadequate cardiac output. In the patient who has survived recent acute circulatory arrest or in the deteriorating patient, correction of metabolic acidosis by intravenous injection of an ampule containing 44.6 mEq of sodium bicarbonate, repeated if necessary in 5 to 8 minutes, may be effective. One must watch for sodium overload producing congestive heart failure with this treatment, however. Premature beats secondary to digitalis intoxication may respond to the intravenous infusion of 40 mEq of potassium chloride dissolved in 1000 ml 5% dextrose in water. In addition, 50 mg/Kg of the chelating agent Disodium EDTA in 200 ml of 5% dextrose in water may be infused over 30 minutes. Although the Beta-adrenergic blocking agent propranolol has been reported to be effective in treatment of ventricular arrhythmias induced by digitalis, this drug has not been released for general use at this time and may precipitate congestive heart failure.[9]

Finally, premature beats may occur in the patient with acute myocardial infarction from an inappropriately slow heart rate, such as sinus bradycardia. Increasing the heart rate with atropine 0.3 to 1.2 mg intravenously or intramuscularly every 2 to 4 hours may be effective. If atropine is ineffective, isoproterenol (Isuprel), 1 mg diluted in 500 ml of 5% dextrose in water administered by controlled intravenous drip, may achieve the same results, but is also capable of inducing serious ventricular arrhythmia. If these 2 drugs fail to produce the desired increase in rate, there are occasions when transvenous cardiac pacing at a rate depending on the patient's need can produce the desired rhythm control.

Treatment of Ventricular Tachycardia

In patients with acute myocardial infarction, ventricular tachycardia may be of more than one type.[1] The most common type comprise brief, self limited paroxysms of from 4 to 20 successive beats at rates from 70 to 250 per minute. (Fig. 1) Observation of even a single episode of this type requires immediate antiarrhythmic therapy which is essentially the same as that discussed above for ventricular premature beats.

A second type of ventricular tachycardia is rapid and sustained, producing serious compromise of circulatory dynamics often manifested by declining pulse pressure, evidence of congestive heart failure, and occurrence of ventricular fibrillation. This arrhythmia should be terminated immediately in patients with acute myocardial infarction. A 50 mg dose of lidocaine is given rapidly intravenously at once and followed in a few minutes by an additional 100 mg if the initial dose is not effective. If lidocaine is not successful, synchronized electrical cardioversion is carried out.

Lown and coworkers[1] recommend proceeding without general anesthesia, starting with 5 watt seconds and gradually increasing to 50 watt seconds interspersed with further doses of lidocaine or other measures which may be necessary according to the needs of the particular patient. Others prefer not to use small graded shocks, starting instead with 400 watt seconds routinely.[2] In the latter dose range, precordial shock is quite painful and requires the use of light general anesthesia with a short acting barbiturate sufficient to produce amnesia.

Our routine has been a compromise between these two extremes. The following procedure has proven to be repeatedly satisfactory. An anesthesiologist or nurse anesthetist is called in. Before anesthesia is begun, every preparation for cardioversion is made, including placement of the posterior chest paddle and checking for proper synchronization of the defibrillator. With a secure intravenous infusion going and an anesthesia gas machine at hand, the minimal amount of thiopental (Pentothal) necessary to induce sleep is given. No muscle relaxants are used.

As soon as the patient is asleep a 50 watt second shock is given. If this is not successful, graded shocks of 100, 200, and 400 watt seconds are then used. Additional injections of lidocaine 50 mg intravenously may be given between shocks. With repeated shocks, small additional doses of thiopental are given at the discretion of the anesthetist to maintain light sleep. Adequate oxygenation is assured by use of the anesthesia mask and bag.

If more than one shock is necessary, the blood pressure must be checked repeatedly every 2 minutes because of the danger of hypotension. Correction of hypotension with metaraminol followed immediately by a 400 watt second shock has proven useful on occasions when initial efforts have failed.

As soon as a satisfactory rhythm has been produced, the patient is allowed to awaken. Although he may have cried out with apparent pain during the anesthesia, the goal of amnesia for the event will have been achieved. Anesthesia of this type in skilled hands may be used even in quite ill patients and has the advantage of avoiding fear by the patient should cardioversion become necessary again later in the course.

Treatment of Ventricular Fibrillation

For ventricular fibrillation electrical cardioversion at 400 watt seconds should be done immediately if possible. If the patient is not in a Coronary Care Unit when this arrhythmia occurs, closed chest cardiac massage and artificial respiration are carried out in the interim until cardioversion is possible. Repeated injections of 44.6 mEq of sodium bicarbonate intravenously every 5 to 8 minutes are necessary to help combat acidosis if it is necessary to continue resuscitation for any length of time. Once the fibrillation has been corrected, the prophylactic drug therapy to prevent recurrence is essentially the same as that described for ventricular premature beats.

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Oxygen as Cause of Pulmonary Hemorrhage in Infants. D. R. Shanklin and S. L. Wolfson New Eng J Med 277:833-836 (Oct. 19) 1967.

Eighty-three autopsis of new born infants, 75 of them premature, were studied for a possible relationship between therapeutic use of oxygen and the development of pulmonary hemorrhages. Twelve infants had received air alone, 11 were given oxygen after six hours, 21 were given oxygen before six hours, and 39 had received it continuouly. Infants receiving oxygen continuously or early showed frequent hemorrhages. Infants receiving oxygen late or left in the air had none. Essential similarity in sex distribution, weight, and survival was against those factors as contributory. Variation occurred mainly in the interval between two and six hours. Infants kept in oxygen continuously had nearly twice the frequency of hyaline membrane disease of the other three groups which had similar incidences. The response was not dose-sensitive, with positive findings at the 30% level in the incubators, suggesting a threshold effect.

Prevention of Rh-Hemolytic Disease. C. A. Clarke et al Brit Med J 4:7-12 (Oct. 7) 1967.

A successful clinical trial of a method of preventing maternal Rh immunization was carried out in three English cities and in Baltimore. The technique was developed over a period of six years and consists of the intramuscular injection of anti-D γ-globulin into the Rh-negative mother soon after delivery of an Rh-positive baby. Included in this trial were 156 primiparae shown to be at considerable risk of Rh immunization by finding evidence of transplacental fetal hemorrhage. Testing of their serum for antibodies at least six months after delivery revealed no case of certain Rh immunization in the 78 treated women and 19 immunizations in the 78 controls. Six of the treated women have had a second Rh-positive baby without the appearance of antibodies, and the results of this trial and of others in the United States and Germany indicate that the technique is not merely postponing the development of antibodies. It seems that Rh-hemolytic disease of the newborn has joined the ranks of preventable diseases.

SURGICAL ASSISTANCE

IDEALISM VERSUS PRAGMATISM

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Speaking in terms of assistance at the operating table, it would appear that surgeons have painted themselves, or have been painted (depending on one's point of view), into a corner. The situation as it now exists lends itself to uncertainty, confusion, dissension and acrimony. In bringing this subject before you, I do so because I feel that it is time for the problem to be thoroughly aired and discussed, and possibly some solutions arrived at through an honest and candid exchange of ideas. I speak as a South Carolina surgeon to other surgeons of South Carolina, and I know of no better forum in which this everyday problem in our professional lives might be considered than at a meeting of the South Carolina Surgical Society.

Perhaps at this time, for the benefit of the younger members of the Society, it may be well to reminisce about how this situation evolved.

In this State, up until about thirty years ago, practically all of the surgeons were trained under the preceptorship system in which a young physician aspiring to do surgery arranged to work with and assist an older, well-established surgeon without any formal arrangement. Often the young men worked with and assisted many of the senior surgeons in a community, learning the art and techniques of surgery. The arrangement was mutually convenient and beneficial; the older surgeon always had one or more younger physicians on whom he could call for assistance at any time of the day or night; the younger physician could look forward some day to being recognized as a qualifed surgeon in the community, usually making a comfortable living and building up a practice as a general practitioner while learning surgery. After a variable length of time, the older physician would begin assisting the younger physician in operating on his own cases. When the preceptor felt that the younger man had acquired sufficient judgment and technical ability to perform good surgery in the hospitals of the community, acting as his sponsor, he recommended to the Governing Boards of the local hospitals that the younger physician be awarded full surgical privileges. This recommendation was usually granted without question. Many of us here today can recall through the years, men under whom we worked who had had no formal training as we know it today, and yet who were keen diagnosticians, masterful technicians, and dedicated and lucid teachers. Many of these surgeons' ability in ably training younger surgeons was recognized, and they were made honorary Diplomates of the American Board of Surgery, and they in turn were largely instrumental in founding the South Carolina Surgical Society.

The first certified residency program in Surgery in South Carolina was begun exactly thirty years ago at Roper Hospital, the teaching hospital for the Medical College of South Carolina at that time. The same year, the American Board of Surgery was founded. This innovation was in response to the then early trend toward specialization ,and the obvious need to standardize the training which the aspiring young surgeon received. Since 1937, residents have been trained principally for the communities of South Carolina, at first at Roper Hospital, and

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Read at the meeting of the South Carolina Surgical Society, June 24, 1967, Linville, N. C.

later at the Medical College Hospital. Since very few people who have completed the residency have had any problem in passing the American Board of Surgery, it is probably fair to say that the program has been successful in its purpose since its inception. As the years passed, many surgeons, products of the program, began practicing good surgery in communities throughout the State. These men were joined by other young surgeons who had completed residencies in other parts of the country. As time went on, other hospitals throughout the State were also approved for the teaching of surgical residents.

When the newly trained and certified young surgeon began to practice in a community, he had to look around for someone to assist him—at least with his more difficult cases. This usually presented a problem in a community hospital, which was a good hospital in the general sense of the term, but which had no interns or residents. Usually, he turned to young general practitioners for help, who, in turn were happy to assist him at operations, since, at that time, they might still aspire toward obtaining limited operating room privileges under his aegis. In the summer, before the quarter system began, one could also count on the services of Junior and Senior Medical Students who were eager to scrub in as first assistants. Many of us here today can recall performing formidable procedures with these young GP's and students without incident.

About the mid 1950's, however, this rather idyllic arrangement was terminated by an edict from the Joint Commission of Accreditation, which plainly stated that henceforth, from that day forward, privileges in the operating room could be extended only to Board Certified and Board Eligible surgeons, and to those general practitioners who at that time enjoyed major operating room privileges—the so-called "grandfather clause." Almost all hospitals still have some general practitioners doing surgery in their operating rooms today who got in under the "grandfather" clause, though their number declines each year. Very few hospitals allowed non-Board surgeons to operate after the issuance of this directive, for fear of losing their accreditation by the Joint Commission.

This situation presented quite a dilemma to the surgeons, since the GP's were no longer interested in assisting them if they could never hope to be allowed to do surgery themselves in the operating rooms. They were not even interested in assisting on a fee basis, since they could make more money and build up their practices by going to their offices or making house calls. This meant that a Board Surgeon would have to ask another Board Surgeon to assist him with every case which might be classified as a major operation.

Everyone here today is a product of some residency system. We were taught our diagnostic and technical skills in a formal program of increasing responsibility over a four to five year period of our lives. We worked in institutions where the operating surgeon usually had an assistant resident and an intern to assist at all major cases.

Certainly this is the ideal situation. None of us could possibly quarrel with that. This is really going "first class," and it is always a joy and a pleasure to do a case with someone who can anticipate your next move, tie a secure knot, give you maximum exposure, and, particularly as one grows older, carry on for you while you drop out for a few minutes on a long case to have a cup of coffee and smoke a cigarette.

However, I submit that this is the ideal rather than the practical, at least as the situation exists in most hospitals in South Carolina today. A large number of us here today work in small or medium-sized community hospitals throughout the State, in which there are no residents, interns or medical students. To compound further the dilemma, there are more people requiring more surgery each year, so that to tie up two surgeons assisting each other with a routine type of case when each could be operating in adjoining operating rooms, would appear to impair the direct aid that only surgeons can offer to certain patients.

It has been estimated that about seventy per cent of the routine day in and day out, "bread and butter" types of surgical cases could be done by a Board surgeon with the aid of a good surgical nurse assistant or operating room technician. This category would include such cases as a routine, uncomplicated thyroidectomy, cholecystectomy, or hysterectomy, or any cases of lesser magnitude. I am sure we are all agreed that massive bowel surgery or thoracotomies should be done by two qualified surgeons. In the last analysis, even with an appendectomy, it is up to the conscience of the surgeon. If he anticipates trouble ahead, he should have a skilled assistant. By the same token, a thoroughly objective Surgical Audit Committee should frequently scan the charts and statistics for any rise in morbidity or mortality which might even conceivably be due to a surgeon's attempting a case with a nurse or technician in which the need for a skilled physician assistant was clearly indicated.

I continue to use the term "skilled assistant." I am sure all of us at one time or another have had an intern assigned to us to assist at a major procedure, who literally did not know how to gown and glove himself without breaking sterile technique, who had just begun his rotation through surgery, and who gave the impression of longing for next year when he would be an assistant resident in medicine. These people are M.D.'s, and satisfy the letter of the law, but they only make one wish that Sally (or whatever one's usual nurse assistant's name may be) could be across the table. Because of this, I am told that many surgeons over the State have their special surgical nurse or technician accompany them from one hospital to the other assisting them with their routine cases. In many other hospitals, nurse and technician assistants in the employ of the hospital, are made available to the surgeon to assist in the routine type of case about which I have spoken. I personally believe that this is as it should be.

In taking this stand, I realize with deep regret that it places me in the position of being at odds with some of my old friends and revered teachers who in so many ways are wiser than I, and to whom I have always looked for guidance and example over the years, long after I completed my residency. But, sad to say, there have been so many changes in the practice of medicine and surgery in the last quarter century, necessitating changes in basic philosophical concepts. Again, I reiterate that the problem of surgical assistance should be re-examined in the light of the present day medico-surgical mores.

I have intently read and listened to the various arguments against nurse or technician assistance at routine operative procedures, and I must say that I am singularly unimpressed. All of us have heard about the surgeon dropping dead during the operation with only a nurse or technician assistant. This is a valid point, but certainly the qualified nurse or technician assistant could obtain hemostasis, pack the incision, and stand by until another surgeon (probably also a coronary candidate) could be summoned. I have always been more disturbed by the thought of the anaesthesiologist dropping dead, and the patient trying to get up and walk back to his room dragging his entrails behind him—or should we have two anesthesiologists on each case, one on a stand-by basis, just in case?

Other friends of mine have pointed out to me how important it is to have another skilled physician assistant should one run into some unexpected complication. I can only answer, that over a period of many years, when such a situation has occurred, I have been able to get immediate help from one of my surgical colleagues within a matter of a few minutes, even if it meant his leaving during his office hours. I have always tried to reciprocate in kind. Fortunately, in Charleston, the surgeons in private practice are a friendly and pretty closely knit group, ready to come to each other's assistance in an emergency at any time.

Then there is the legal angle.

Recently, Dr. George C. Stevenson and his technician surgical assistant, Roger Whittaker, have been sued by their State Board of Medical Examiners. Mr. Whittaker has been assisting neuro-surgeon Stevenson for some time. Whittaker has been charged with practicing medicine without a license, and the physician is charged with aiding and abetting him. Both men were tried, found guilty, fined, and given suspended sentences. The ruling is being appealed.

At the trial, several experts, including Duke University's Dr. Stead, testified that surgical technician assistants fill a much needed role and that, in many hospitals around the country, they are now performing the same tasks that caused Whittaker to run afoul of the law. Whittaker's defense counsel insisted he was well qualified for his duties. He had been trained as an operating room technician by the Navy, and one Commanding Officer called him "one of the best hospital corpsmen I have ever encountered." Dr. Howard Wells, Board Chairman of the Memorial Hospital in Redding, where the surgery was performed, testified that "Whittaker is a better neurosurgical assistant than I am." Dr. Stevenson testified "I couldn't work properly without Whittaker."

While the legal questions are being defined, many surgeons agree with Dr. Stevenson, reporting that the medical assistants of all kinds are of the utmost value. And this belief is finding an echo in government circles concerned with helping to overcome the shortages in medical manpower. HEW Secretary John W. Gardner said recently, "We can no longer function in a situation in which we have people who are trained only at the level of the Ph.D. and the M.D., and the post doctoral specialties of various kinds. We must constantly think in terms of varying levels of expertness in a kind of team relationship, with each member of the team taking his role according to his level of expertness."

The license question is being tackled in a unique manner in Missouri, where the State Medical Association is seeking to have the State Board of Registration for the Healing Arts approved by the legislature as an "umbrella group" covering the licensing boards of individual disciplines. Under the proposal, each allied health field would have its own regulatory board, subject to the ultimate authority of the Healing Arts Board.

Finally, as far as I can foresee at the moment, there is the question as to what role the "assistant Doctors" being trained at Duke will play in the future as far as the complete surgical team is concerned.

Associations and group practice have been hailed as the obvious answer to this problem. However, from observation of groups or associationships over the years, it appears that when two or three surgeons form an associationship or group, the practice doubles or triples, and they are still left looking for an assistant—often from a surgeon outside of the group.

Recently, I spent most of the day with the inspecting physician from the Joint Commission of Accreditation while he was surveying the St. Francis Hospital in Charleston. I deliberately brought up the question of assistance at surgery, outlining how it had been set up at that particular hospital, pretty much along the lines that I have outlined previously. His reply: "That's about the way it's being done all over the country."

In conclusion, I will agree that it is ideal to have a resident or assistant surgeon on every case. But to the pragmatist, this is often not possible—in which case we must fall back on the increased utilization of the surgical nurse or technician assistant for routine cases. Most important of all, we must remove the aura of clandestine activity accomplished by surreptitious means. As surgeons, let's be honest among ourselves, and not develop all sorts of guilt complexes if you slip out a gall bladder with a nurse, or hurl epithets at a brother surgeon if he prefers to do his thyroidectomies or vaginal hysterectomies with his own personal technician assistant.

How do you all do it over the rest of the State? I know you don't agree with us in Charleston about open bars, but how about surgical assistance?

The practicing surgeon in the role of skilled assistant. William H. Prioleau. (Charleston) Surg Gynec Obstet 124:116-117, (Jan., 1967)

While the number of qualified surgeons and accredited hospitals is increasing there is a steady decrease in the number of skilled assistants available for operations. Many residencies are not filled and apprentice assistants are becoming fewer. In some hospitals, practicing surgeons are the only available source of assistants required for some types of operations. They should make themselves available for this role in order to maintain a high standard of surgery. The related ethics and practicality are considered in detail.

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Effects of Anabolic Steroids in Chronic Renal Failure. M. H. Sigler and B. Issekutz, Jr. Arch Intern Med 120:408-416 (Oct.) 1967. fflffl

Eleven patients with chronic long-standing renal failure and stable nitrogen metabolism and renal function were given anabolic steroids of the type norethandrolone and oxandrolone. All 11 showed an improvement in biochemical uremia as demonstrated by an average 27% fall in serum urea nitrogen (SUN). All patients gained weight. Nitrogen excretion studies explained this drop in SUN on the basis of diminshed protein breakdown. Anabolic steroids may possibly be of adjunctive use in the treatment of chronic azotemic patients, particularly in the presence of malnutrition or during acute decompensations of renal function which are potentially reversible.

POSTGRADUATE PROGRAM

An intensive program on "Current Concepts in Cardiology", is being offered by the Institute for Cardiovascular Diseases at Good Samaritan Hospital, Phoenix, Arizona and the American College of Cardiology. This meeting will be held at Del Webb's Towne House, Phoenix, Arizona on January 10, 11 and 12, 1968. Program Director, Alberto Benchimol, M.D. with Guest Faculty, E. Grey Dimond, M.D., William Chardack, M.D., Darrell D. Fanestil, M.D., Mr. Dean Franklin, George C. Griffith, M.D., Paul G. Hugenholtz, M.D., Albert A. Kattus, Jr., M.D., C. Walton Lillehei, M.D., Oscar Magidson, M.D., Alfred Pick, M.D., Robert L. Van Citters, M.D. This is an oficial program of the American College of Cardiology. The Institute of Cardiovascular Diseases Faculty consists of Alberto Benchimol, M.D., Lee Brown, M.D., Lee Ehrlich, M.D., and Marian Molthan, M.D. For information about this program write to William D. Nelligan, Executive Director, American College of Cardiology, 9650 Rockville Pike, Bethesda, Maryland 20014.

OBSTETRICAL EXPERIENCE WITH SICKLE CELL ANEMIA

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The presence of abnormal maternal hemoglobins appears to have profound effects on fetal survival, maternal morbidity, and even maternal mortality. Most authors agree that these hemoglobinopathies, especially sickle cell anemia (S-S disease) and sickle cell hemoglobin C disease (S-C disease), are far more life-threatening in the pregnant than in the non-pregnant state.[3,4,11,12]

Approximately 8 to 11% of American Negroes are said to harbor the sickle cell trait.[3,6,10,14] Nearly 20 years ago, Switzer[14] found an unusually high incidence of hemoglobin S in Negroes from the sea island area of South Carolina. His study was based on the appearance of sickled erythrocytes in peripheral blood specimens; hemoglobin electrophoresis was not available. No distinction was made between Negroes who were homozygous and those who were heterozygous for hemoglobin S.

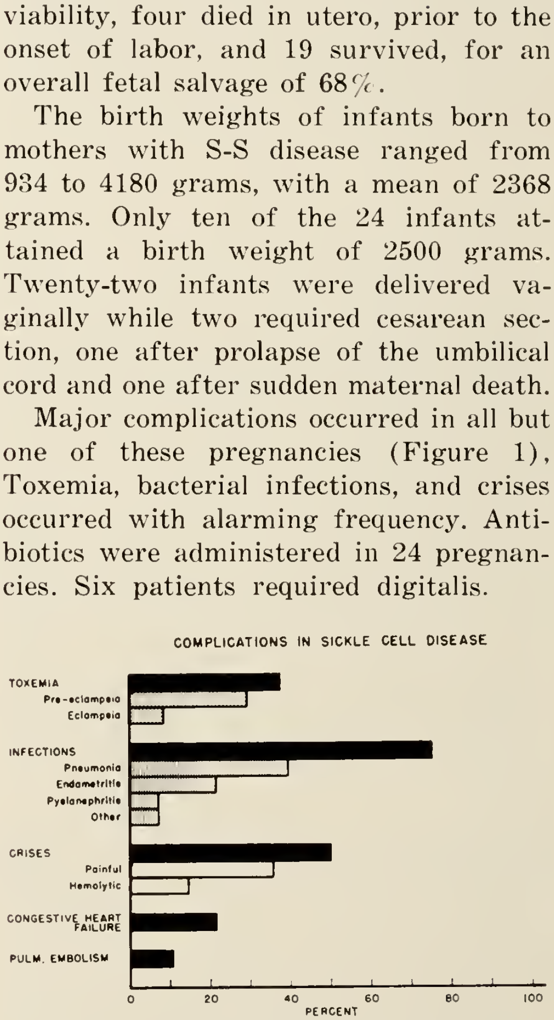
From this population, pregnant Negroes with sickle cell anemia have been seen with increasing frequency at the Medical College of South Carolina. During the years 1960 through 1966, 25 patients with homozygous hemoglobin S have experienced 28 pregnancies, an incidence of one in every 641 pregnancies. Maternal age in this group varied from 17 to 32 years (mean and mode 22 years) while gravidity ranged from one to 6 (mean 1.9). Thirteen of these patients were primigravidas.

Effect of Disease on Pregnancy

Four pregnancies ended in spontaneous abortion and there was one immature stillbirth. Of the 23 infants reaching viability, four died in utero, prior to the onset of labor, and 19 survived, for an overall fetal salvage of 68%.

The birth weights of infants born to mothers with S-S disease ranged from 934 to 4180 grams, with a mean of 2368 grams. Only ten of the 24 infants attained a birth weight of 2500 grams. Twenty-two infants were delivered vaginally while two required cesarean section, one after prolapse of the umbilical cord and one after sudden maternal death.

Major complications occurred in all but one of these pregnancies (Figure 1), Toxemia, bacterial infections, and crises occurred with alarming frequency. Antibiotics were administered in 24 pregnancies. Six patients required digitalis.



Fifteen patients were hospitalized 45 times during pregnancy while 13 were hospitalized only once. Days of confinement per pregnancy ranged from two to 48, with a mean of 16 days.

There was one maternal death in this group. This 23 year old primigravida, previously not suspected of having sickle cell disease, experienced sudden cardiac

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arrest during labor. Cesarean section was performed immediately post mortem with delivery of an 1868 gram stillborn infant. Autopsy on the mother revealed multiple pulmonary infarcts and widespread pneumonia. Sickled erythrocytes were seen in all tissues. This patient had experienced previous arthralgia but no true crises. Unfortunately, this was the single patient in whom no hemoglobin electrophoresis was performed. Although she was diagnosed as having sickle cell disease, the finding of a rather large spleen weighing 300 grams tends to refute this diagnosis.[6] She may have had sickle cell hemoglobin C disease.

Effect of Pregnancy on Disease

During their pregnancies, apparent hemolytic or hypoplastic crises occurred in four patients while ten suffered recurrent episodes of bone and joint pain requiring hospitalization and narcotics. Five of these 14 patients had never previously experienced sickle cell crisis of any type.

Increasing anemia as pregnancy progressed was observed in every patient. Mean hemoglobin on hospital admission was 7.8 grams per 100 ml and mean hematocrit was 19.5 volumes percent. Blood transfusion varying from two to seven units was necessary in 22 patients.

Comment

No attempt has been made to screen all obstetrical patients for abnormal hemoglobins. Most of these cases were discovered during the routine evaluation of an anemia during pregnancy. One might assume that a few patients with S-S disease delivered with their hemoglobinopathy unsuspected.

Previous studies have found the perinatal mortality rate in sickle cell disease to vary from 23.5 to 52%.[1,3,6,8,9,12] In this series the perinatal mortality (excluding 4 abortions) was 20.8%. The five stillborn infants all died prior to the onset of labor. No infant expired during labor or in the neonatal period.

The low infant birth weight in this series prompts speculation. A control series of infants delivered during the period under study had a mean birth weight of 2946 grams, or nearly 600 grams more than those infants born to mothers with S-S disease. These low birth weights may be due to placental insufficiency caused by stagnation of erythrocytes with subsequent de-oxygenation of hemoglobin in the sluggish placental circulation.[7] However, factors such as chronic anemia, maternal debility, and the high incidence of toxemia must be considered.

It is generally agreed that the frequency of toxemia is increased in sickle cell disease. [1,6,8,16] An incidence of 37.5% was found in this group, approximately fourfold that generally seen in this clinic.

The frequency of pneumonia in this series and in others[8,9,16] is quite impressive. This complication accounted for multiple hospitalizations and greatly prolonged the hospital confinement for several patients. A wide variety of etiologic organisms were incriminated.

Other infectious diseases were seen with less frequency. Puerperal sepsis in the form of endometritis occurred in 21% and was often quite resistant to therapy.

Treatment

During the past ten years, corticosteroids, vasodilators, anticoagulants, cobalt, acetazolamide, alkalies, and magnesium have all been tried with questionable success.[13] Hendrickse and Watson-Willams[7] have even recommended exchange transfusions to clear the maternal vascular system of sickled cells.

At the Medical College of South Carolina pregnant patients with known hemoglobinopathies are seen weekly or biweekly in the outpatient department. Hemoglobin determinations and urine cultures are performed at frequent intervals. Hospitalization is mandatory whenever toxemic or infectious complications occur. Hemoglobin is generally maintained above 7.0 grams per 100 ml, using intermittent blood transfusions when necessary.

Patients in crisis are usually treated by hospitalization, bed rest, increased atmospheric oxygen, narcotics for pain, and blood transfusions as needed. Prophylactic or specific broad-spectrum antibiotics are almost always used. Digitalis is given to patients exhibiting signs of cardiac decompensation.

Sternberg[13] feels that labor should be induced prior to term to prevent death in utero from placental insufficiency. Apthorp et al[2] feel that cesarean section should be performed prior to term for this same reason. In the present series of sickle cell anemics, only ten of 24 infants were carried to term, the remaining 14 having had spontaneous onset of premature labor. All five of the stillborn infants died long before term and long before induction of labor could be considered; the largest weighed 1312 grams. No infant died during labor. Therefore, spontaneous labor is awaited and vaginal delivery expected.

Sterilization by tubal ligation is generally recommended for those patients with difficult courses in pregnancy. This operation frequently cannot be done immediately postpartum because of the patient's anemic and often debilitated condition. These patients are then re-hospitalized approximately three months postpartum for tubal sterilization by the colpotomy approach.

Summary

Twenty-eight pregnancies complicated by sickle cell disease are reviewed. Increased frequencies of toxemia, bacterial infections, crises, and a high perinatal mortality rate are confirmed. General aspects of management are discussed.

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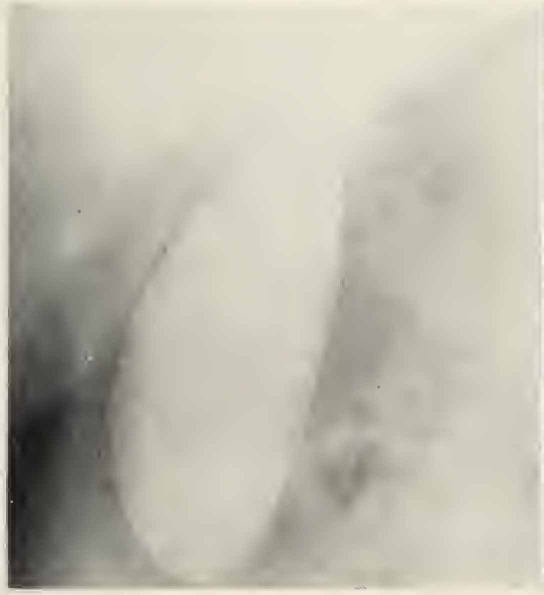
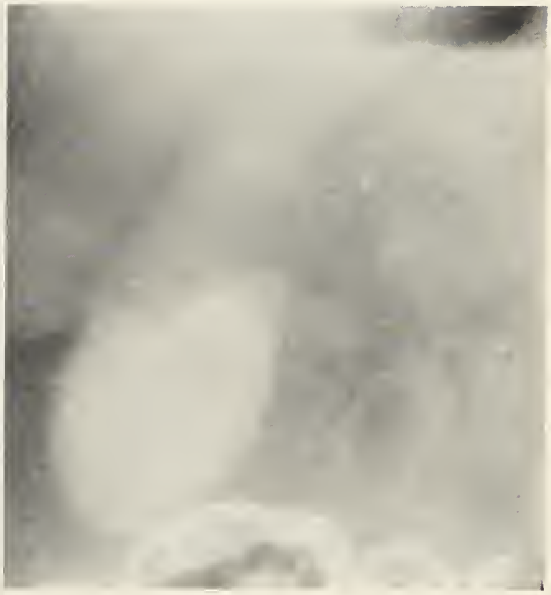
X-RAY FILM OF THE MONTH

S. E. PUCKETTE, JR., M.D.
Medical College Hospital
Charleston, S. C.





These spot films of the gallbladder region were taken at the time of a barium enema. The patient, a 42 year old white female was referred on an out-patient basis for this study because of indefinite upper abdominal symptoms which for the most part consisted of attacks of upper abdominal pain which subsided without medication. These had been occurring for approximately 18 months with increasing frequency. The patient denied having received any type of gallbladder contrast media.

This is a case of "limy bile" sometimes referred to as "milk of calcium bile" or "limewater bile".[1] It is due to the formation of a suspension of crystals of calcium salts within the bladder. These salts, being opaque to x-ray, delineate to a greater or lesser extent the gallbladder (Fig. 1) and occasionally the common duct.[2] The consistency varies from a thin white fluid to a paste, at times to being solid enough to be considered a concretion. The amount varies, at times almost filling the gallbladder, but more often being associated with a thin clear hydropic nonopaque bile, which in the upright position rises above the layer of limy bile as shown in Fig. 2. Obstruction at some point in the biliary tract is a prerequisite to the condition. It is usually in the cystic duct and often the impacted stone is seen. The exact pathophysiology of the condition is yet to be explained. The true incidence is not known, but the condition is considered to be rare. Symptomatology, age, and sex distribution are essentially the same as for other types of gallbladder diseases.

As the appearance of the gallbladder is at times indistinguishable from that of the normal cholecystogram, one must be sure that the patient has not inadvertently received gallbladder contrast media. The treatment is surgical.

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President's Pages

SCALPEL is the equivalent on the state level of AMPAC on the national level. Each reinforces the other.

Of the some sixteen hundred members of the SCMA about 266 belonged to SCALPEL in 1966 and 238 in 1967. If the vast majority of us is conservative there should be a thousand to twelve hundred members. Of course, if the majority is liberal or socialist we should not bemoan the dearth of SCALPEL memberships.

As a matter of interest AMPAC (American Medical Political Action Committee) has some thirty five thousand members.

The vast majority of congressional aspirants supported by AMPAC and/or SCALPEL were elected to office.

Losing on Medicare was not a war lost—it was one battle. Others are sure to follow. The war has been going on for thirty five years or more and is going to continue. The medical profession can largely determine its length and its outcome—by passive submission into slavery or by fighting for what we believe is best for the American people. The result is up to you. Choose your candidates and support them every way you can including, *if you are a conservative,* joining SCALPEL or, if you are not a conservative, by every legal means you can bring to bear. If you do not register and vote, do not take any part in politics, do not choose and support candidates with your time *and your money* it is ridiculous for you to criticize the government. It seems to me that the majority of those most critical of changes, such as Medicare, never took any part in politics. Not infrequently they are very vocal in stating they can not see where the SCMA or the AMA has done anything. Since they are usually not interested and so have not been active in the SCMA or other medical organizations they are entirely unfamiliar with the trojan work done by those organizations, the AAPS, and others. Such critics should become active or quiet. They have little right to protest if they will not participate. Let's wake up and choose our candidates of our taste and *support* them.

We physicians must get into politics if our profession is to survive in its present form. It is not enough to fuss and criticize. We must register, get others to register, 'politic', and vote. Politically we have been retiring, meek, self-conscious for far too long. The aggressive, vocal, socialistic elements have obtained the upper hand—largely by default on conservatives part. The legislature, the governor, the politicians in general tend as a rule to ignore us, not because they don't respect us but because they don't fear us. They can only get elected by votes and the medical profession just has not turned out the votes. It is the votes that count.

Detailed political activity is contrary to the tastes and training and tendencies of most physicians. We want to save lives, not to 'knock off' political opponents. But we still think that the present system of practicing medicine is best for our country and it distresses most of us to see the threatening changes.

There are ways we can make our convictions felt. If we are able and not disinclined we should actively 'politic' for the men we think are best for office. Or we can send hard cash to the political aspirants of our choice. In an election money carries tremendous influence. If a thousand physicians in South Carolina sent a hundred dollars each to any candidate for any office in our state it would have unbelievable influence. With so much at stake it is hard to believe most physicians do not and will not do this or something akin to it.

A third thing—one of the most important conservative physicians can do—is to join SCALPEL. SCALPEL supports conservative candidates friendly to our profession and does it remarkably well. It is active almost entirely among candidates for the United States House of Representatives where there looks like a good chance to influence an election. SCALPEL is not associated with any party.

SCALPEL is not intended as a replacement for other political activity towards which one might be inclined but as a reinforcement.

Norman Eaddy, M.D., President

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50 YEARS AGO

The Journal of the South Carolina Medical Association

Dec. 1917

This issue was devoted to Child Welfare, with accounts of early efforts in this direction in various areas over the state. The U. S. Children's Bureau had started to work in Orangeburg County.

In a paper in this issue castor oil was recommended as treatment of enteric infection. An infant mortality record listed many deaths from enteritis, entero-colitis, diarrhoea, cholera infantum, and ileo-colitis.

Dr. F. H. McLeod's private Florence Infirmary was in operation.

QUIDNUNC

No wonder the post office costs us money. A typical horrible example of waste is seen in the mailing of a trivial and flimsy release, Medicare News Letter, in an expensive, heavy manila envelope, sealed by hand, and sent by air mail. Can any word on Medicare be that urgent?

* * *

In the past 15 years, the number of physicians in full time private practice has decreased at the rate of almost one per cent a year, from 75 per cent in 1950 to 62 per cent in 1965.

Figures show that the percentage of foreign physicians in the United States had risen from 16 per cent in 1956 to 26 per cent in 1966 and that nearly half of them were from under-developed or developing countries that badly need their services.

"There has happened another Revolution in the Point of Good Breeding, which relates to the Conversation among Men of Mode, and which I cannot but look upon as very extraordinary. It was certainly one of the first Distinctions of a well-bred Man to express every thing that had the most remote Appearance of being obscene in modest Terms and distant Phrases; whilst the Clown, who had no such Delicacy of Conception and Expression, cloathed his Ideas in those plain homely Terms that are the most obvious and natural."

The Spectator 1711

This seems to classify a lot of our modern writers.

Editorials

Project Head Start

When Head Start first got under way it took the bit in its teeth and rushed off in all directions, scattering our tax money lavishly, often in the form of fat salaries to the unknowledgeable. In time it slowed down in its rapid career, and waited for a little advice from those people who knew best where it should be going.

The philosophy of Head Start has been acceptable and even praiseworthy, but the early methods of implementation were properly subject to much criticism. Now at last it seems that the once headstrong Office of Economic Opportunity realizes what should be done, and indeed logically should have been done in the beginning, and that is that it should ask advice from people who know what such programs are all about.

At last the American Academy of Pediatrics has been called on to join in a partnership with the OEO. The Academy will organize and direct the Medical Consultation Program of the nearly 2,000 local programs throughout the country. Thus the OEO gets the knowledge and advice of more than 10,000 pediatricians, members of an organization that has set the standards for child health care both in this country and abroad. Government gets the best advice available, and the Academy volunteers to accept the challenge to develop responsible pediatric leadership in an important field.

With this cooperation, it is likely that Head Start will run a good race and avoid the risk of falling flat on its inexperienced face.

Bariatrics

Some many years ago a famous traveller in the United States was impressed by the propensity of the inhabitants toward forming societies and organizations of all sorts and varieties. This native impulse has in no way lost its vigor. The number of clubs, societies, associations, groups, parties and so on is already almost infinite, and still "thick and fast they come at last, and more and more and more."

Now there is brought to notice a news release concerning activities of the American Society of Bariatrics, to this previously uninformed mind a strange name with a strange word included. Medical dictionaries yield us no clarification. Source books offer the clue that the Greek word *baros* refers to weight or heaviness, hence bariatrics must mean a branch of medicine concerned with human avoirdupois and bariatricians must worry their minds over the problems of corpulence, presumably that of their patients.

The policy of the Society states that its members recognize the multifaceted sources of obesity, and that they take the pledge to make proper investigation of the true causes of the condition by adequate interrogation and ample tests, both physical and laboratorial. This probably would be the practice of any conscientious physician, but it would seem that emphasis is required for those other physicians who are less meticulous.

And what do you suppose happens to the member who flunks his own weight test? Perhaps he is subjected by his fellows to a rigorous ordeal of interrogation and testing, so that his status may be restored by proper measures, no matter how drastic, so long as they are scientific.

Medicaid

The current hassle over whether or not usual and customary fees should be paid physicians for services rendered Medicaid patients as they are for services to Medicare patients indicates that despite pronouncements from national welfare leaders to the effect that Medicaid is not a *welfare* program but a *social* program financed by taxes, there are welfare leaders in the field who cannot accept the fact that, under third-party arrangements, the traditional concept of free medical services to welfare patients is obsolete. Their resistance is formidable.

As of this writing, less than half of the approximately 30 states that have implemented Medicaid are paying usual and customary fees. Admittedly, there are fiscal problems involved, with which the physician as a taxpayer can sympathize. It is apparent, however, that welfare directors in most states are refusing to accept even the principle of usual and customary fees for Title XIX beneficiaries.

The welfare directors seeking cut-rate payments to physicians under Medicaid are virtually demanding that physicians subsidize the Government—a Government that has assumed the responsibility of paying for medical services to a large segment of the population. The traditional ethical principle that physicians should treat patients in need of medical care without regard to their ability to pay is noble in concept and practice. Once, however, the patient becomes the beneficiary of a federal or state program that guarantees that he will receive high-quality medical care, and that it will be paid for, he cannot justifiably be classed as a medical charity case. The concept of the federal Government as a charity case is ridiculous.

There is every indication that it was the intent of Congress to provide the same high quality of medical care to Medicaid beneficiaries as provided to Medicare beneficiaries. It is apparent that it is also the intent of those responsible for setting up state Medicaid programs. Their insistence, however, that payments by the government to physicians for high-quality medical care to indigent patients be on a schedule less than usual and customary fees is not only unfair but also, as is painfully evident, unrealistic.

Reproduced with the Permission of
The New England Journal of Medicine
October 5, 1967

LETTER TO THE EDITOR

Regional Medical Program

It is a privilege to reply to your request for more detailed information concerning the prospects of the South Carolina Regional Medical Program.

The current planning activities of the Program will lead to an initial operational grant application, which, with the approval of the Regional Advisory Group, will be submitted to the Division of Regional Medical Programs in late February, 1968. The guidelines of the Regional Advisory Group, will be submitted to the Division of Regional Medical Programs in late February, 1968. The guidelines of the Regional Program describe activities appropriate for operational grant support under the following headings; (1) *Continuing education and training*—"Operational grant funds can support costs of programs, including teaching staff, equipment, educational materials, transportation, rental or renovation of space and related demonstrations of patient care. However, the grant may not supplant previous support for ongoing activities in this area. Consideration will be given to programs for medical, allied health personnel, and associated professions. The primary intent of the legislation is the support of activities that are beyond those normally accepted as basic preparation for the work in the health field. Applicants are encouraged to explore innovative training approaches and the development of new types of health personnel to meet the manpower needs of the region." (2) *Research*—This research category does not include biomedical investigation, but rather the study of better means of "accomplishing the purposes and objectives of the Regional Medical Program." (3) *Demonstrations of patient care*—"Grant funds could be used to pay costs incident to demonstration activities, including staff and equipment." (4) *Alteration and renovation*—90 per cent of the costs, when needed for projects under the Program. (5) *Communication systems*—"Purchase or rental of communication systems to be used for educational, diagnostic or other purposes. (6) *Computers*. (7) *Diagnostic and treatment equipment*—which is identified as a specific need of the region, in locations selected for efficient and effective use. (8) *Support of staff in cooperating institutions*— "This staff might be engaged in supervising and coordinating the Program activities or be involved in specific Program elements." (9) *Consultant services*—for advice related to Program activities. (10) *Transportation of patients*—"when justified as the most efficient means of carrying out the purpose of the Program."

Projects included in an operational grant application must have two qualifications: *need*, as documented through planning studies; and *regional approval*, as expressed through the decision process of the Regional Advisory Group.

The possibilities of the Program are thus immensely broad in scope. The Program staff will assist or carry out the necessary planning studies. Meaningful development of the Program, however, must depend on the guidance of the medical leaders of the state.

We shall keep you informed as the Program progresses, and shall look forward to your comments and suggestions.

Sincerely,
William M. McCord, M.D., Ph.D.
President, Medical College of S. C.

REPORT FROM THE 1967 AMA COMMUNICATIONS INSTITUTE CHICAGO Aug. 24-25, 1967

WINSTON J. GODWIN, M.D.

The AMA Communications Institute was a two day meeting for representatives from all the state Medical Societies. It was designed to bring together information that would be pertinent to all physicians relative to public relations. Attempts were made to find better ways to disseminate information that should be of interest to all physicians—especially to those who, for one reason or another, seldom gained the information that was intended to be brought to their attention.

Public relations projects included such items as "hot line" letters to physicians—letters that would be easily recognized as important organized medicine information so that they might be opened and read by the addressee. Also, bulletin boards kept current and located in key places were also considered a good method to get information where it was desired. Outdoor advertizers could aid Medical Societies by putting several messages on billboards every year, possibly as a public service. Instant news service has been instituted in Pennsylvania. This method of communications with the public is accomplished by getting together with radio stations so they would call the Medical Society daily for news so it could be used as "spots" as a public service. Important current news is called into the radio station by the Medical Society. This has proved to be very successful.

Slide presentation is considered easily adaptable to any group. Medical information that would be interesting to churches, scouts, physicians, or almost any group can be easily presented this way. These programs can cover almost any subject and can be shortened or lengthened easily. Homemade slides are considered easy to make.

Communication with physicians is still

considered a most difficult problem. First class mail should always be chosen over other classes of mail. Timely telephone calls are very effective and often have a progression effect.

Some public relations problems revolve about the image of physicians. Unavailability, high charges, too little time spent with patients, big cars and houses all have some effect on the image. It is good for the physicians to be aware of these types of problems and remind themselves that sympathy still has a place in the "art of medicine". We should attempt to get insurance companies, news media, and others involved, to stop advertizing medicines high cost. The public should be educated better about the real problems physicians have with patients, his time, and programs.

The most effective public relation programs are those that included services to the public such as polio or measles immunizations, and cancer detection.

A very interesting talk was made by Dr. Joseph Cooper of Washington, D. C. on his views of getting more done in less time. His personal example was that when he set out to gather material to write a certain book he would simultaneously save and categorize material that he would find along the way, on subjects he was otherwise interested in. This frequently meant that by thinking indirectly about the subjects and saving material by this method he would have to do only a small amount of work to prepare another one or two books.

Workshops were held for discussion of communication problems. It seemed that the same old perennial discussions were rehashed. Opinions were brought up regarding methods to cut down on some of the mail going to the physicians office. It was generally felt that more physicians should be asked to participate in state and national society levels—especially at the meetings; that many physicians were waiting to be asked to attend and participate.

Government Health Programs were discussed. The Atlanta and the Denver stories were told. In general, the stories were told of how the government paid little or no attention to local and state medical organizations when they established local health agencies. The OEO and the war on poverty have caused "monsters" in at least these two cities. Much erroneous news about the success of these programs has been given by the news media and Washington has been very anxious to portray the apparent "success" of these programs. Evaluations of these programs really were not done before they were labeled as so successful.

Mr. Charles Shuman, President of the American Farm Bureau Federation told that the medical profession had just begun to get government controls whereas the farmers have been fighting this for 30 years. He further asked that we never stop fighting because the socialists are always wrong. He quoted Churchill by saying "that free enterprize is an unequal distribution of blessing and wealth but that socialism was an equal distribution of poverty."

The AMA is always ready to help in any problem we have. It has much available material and is always open for suggestions. We need more participation.

Medical College of South Carolina

Drs. Kenneth M. Lynch and **Forde A. McIver** have received a grant continuation of $32,500 from the Council for Tobacco Research for their studies on asbestos as a possible carcinogen or co-carcinogen.

Dr. Gordon R. Hennigar visited the Dept. of Pathology at Yale Univ. on Oct. 9-11 in conjunction with lectures and a seminar on lung disease which he conducted at the Univ. of British Columbia School of Medicine in Vancouver, Oct. 16-22. The lectures and seminar were presented before the North Pacific Pathologists Assn.

Drs. Willis K. Mylin and **Robert F. Hagerty** attended the Fourth International Congress on Plastic Surgery in Rome, Italy, Oct. 6-13. Their report, "Prosthetic Closure of Cleft Palate," was presented by Dr. Hagerty.

On Oct. 17, Dr. Mylin gave a seminar at the Royal School of Dentistry in Malmoe, Sweden, and on Oct. 19 he gave a seminar at the Dental Hospital of the Univ. of Glasgow.

Dr. W. Curtis Worthington lectured on Oct. 2 at the Univ. of Pittsburgh Dept. of Physiology and on Oct. 16 at the Univ. of Oklahoma Medical School on "Growth Hormone Releasing Factors."

Dr. Dale Groom was elected Vice-President of the Mayo Clinic Alumni at their annual meeting in Rochester, Minn., Sept. 29-30. The Vice-President serves on the Executive Committee of the Assn. and traditionally subsequently assumes the office of President.

The School of Allied Health Sciences completed its first year of operation on Oct. 31. Student enrollment is over 140 at present in eight different areas of the auxiliary health sciences. This is more than triple the enrollment a year ago in programs then in operation.

A student body of 400 is in the near future for the school, said **Dr. George F. Stevenson**, Dean.

"The main objective of this school is the recruitment and training of allied health science workers in sufficient numbers to meet the needs of South Carolina," Dr. Stevenson said. "We also need to make known the diverse employment opportunities that are available in South Carolina in the health field."

During the past year the school has brought two additional institutions, Erskine College and the Univ. of South Carolina, into its accredited medical technology program. Under this plan the student spends the 4th year of college at the Medical College but receives a bachelor's degree from the home school. Other institutions participating in the program are the College of Charleston, Coker, Lander, and Winthrop Colleges, and Furman Univ.

MEETING

The American College of Physicians will present Neurology and the Internist Jan. 15-19 at the University of Miami School of Medicine. The Eden Roc Hotel will be headquarters.

For more information write: Edward C. Rosenow, Jr., M.D., 4200 Pine Street, Philadelphia, Pa. 19104.

Dr. Roland W. Penick of Philadelphia has been named health officer for Greenville County, and is now working for his master's degree in public health at the University of North Carolina. A native of Georgia, Dr. Penick is a 1949 graduate of the Medical College of Georgia, and his medical training includes a one-year residency in general practice and a two-year residency in pediatrics with certificiation by the American Board of Pediatrics. He is a fellow in the American Academy of Pediatrics. **Dr. Rodney H. Maingot** of London, England, an internationally known authority on abdominal surgery, was banquet speaker at the 33rd annual Piedmont Post Graduate Assembly in Anderson in October. Some 800 doctors in South and North Carolina and Georgia were invited. **Dr. Vivian Pierce Patterson** of Chester was one of seven distinguished South Carolina Masons whe received the honorary Masonic 33rd Degree in Washington this fall. **Dr. Luther M. Mace,** who has practiced general surgery at the Barnwell County Hospital since it was opened in 1955, is leaving to study anesthesiology at the Medical College of South Carolina. He will leave Barnwell in January. The American Cancer Society named **Dr. John M. Fleming** of Spartanburg a delegate-director for South Carolina during the annual meeting of the House of Delegates in New York City in October. Among the guests at a past presidents' breakfast held in Clemson in conjunction with the 19th annual Scientific Assembly of the South Carolina Chapter of the American Academy of General Practice were **Dr. William H. Speissegger** and **Dr. I. Ripon Wilson Jr.,** both of Charleston, and **Dr. George G. Durst** of Sullivan's Island. **Dr. Cecil F. Jacobs** of Tulsa, Okla., has been named director of the Charleston County Health Department. He is director of the Tulsa City-County Health Department, and was graduated from the Medical College of Georgia and received his master's degree from the University of North Carolina.

JUST WHAT IS AMDOC?

AMDOC (short for AMerican DOCtor) is a non-profit corporation. It is not a government agency. AMDOC is not religiously oriented. It is a person-to-person medical and educational service. AMDOC arranges assignments in foreign medicine. AMDOC's roster of hospitals in foreign areas contains numerous requests for general practitioners, specialists and allied personnel. Their skills are acutely needed in locations in Central and South America, the Far East, Southeast Asia and Africa.

AMDOC receives applications from physicians, dentists and allied personnel for foreign assignments. They offer to serve as volunteers for periods from one month to three months or longer without compensation. They finance their own transportation. Their motivation may be a desire for broader experience or for giving of themselves, or both. It can be a challenging, rewarding and exhilarating experience. It is also fun. AMDOC encourages family participation as a means of education in basic international human understanding.

AMDOC assignments are acceptable for educational credit by the American Academy of General Practice.

Its founder is Paul Williamson, M.D.

The Working Board, composed of thirty-one doctors who have served one or more AMDOC assignments, advise doctors going to locations in his world area of service.

Ask Denis K. Karzag, Executive Secretary of AMDOC, 27 East Canon Perdido Street, Santa Barbara, California 93101, for more details and copy of AMDOC's publication which informs its readers of current programs and reports of physicians returning from abroad.

SOUTH CAROLINA ALLIANCE
SCALPEL
LIBERTY, POLITICAL EDUCATION, LIFE

Medicine, Government and You

Medicine has a new partner now—GOVERNMENT. This partner is a bit different than the usual one because this one has the power to control the other. Webster's dictionary describes government as the "act or process of governing the affairs of men; authoritative direction or control". You and I can be a part of that "act or process" if we exercise both our medical and our citizenship responsibilities. In this partnership we can influence the affairs of medicine by active participation in our Medical Association and influence the affairs of government by active participation in our political action committee—SCALPEL and AMPAC. We can wear two hats.

We in medicine must somehow establish rapport with and exert our influence on officials of our present government. We must also play an effective part in the election of responsible people to the Legislative Halls of the future. How? By POLITICS. The Medical Association has a political responsibility—SCALPEL and AMPAC have political responsibility. Each has a joint political responsibility to the members of our Medical Association. Let me explain—

POLITICS by definition in Webster's Seventh New Collegiate Dictionary is "the art or science concerned with guiding or influencing governmental policy" or "the art or science concerned with winning or holding control over a government."

For us to be effective in the affairs of government and politics we must be involved in three activities (1) Legislative activity (2) Political education and (3) Political action.

A clear understanding of the meaning of these three functions will serve to point out the need of, and your support of, your political action committees, SCALPEL and AMPAC, IN ADDITION to supporting your State Medical Association and the AMA.

LEGISLATIVE ACTIVITY is "the art or science concerned with guiding or influencing governmental policy" as it pertains to a particular issue. Legislative Lobbying—if you prefer. (Example: Osteopathic Bill, Medicare. This is the responsibility of the Medical Association.)

POLITICAL EDUCATION is the act of providing materials and other means to educate the association members in the art or science or politics. Here is an overlapping activity usually assigned to the Political Action Committee, but this is a responsibility of BOTH the Medical Association and the Political Action Committee. This is simply the 'nuts and bolts' of "How to win an election". The mechanics of politics—if you prefer. (Example: Conduct courses on party organizations, prepare voting records, presenting movies or slides on political subject, etc.) This could be paid for out of a special fund in which corporate dollars and membership dollars may be deposited. This requires the effort of both the Medical Association and the Political Action Committee working hand in glove, yet separately, for maximum effectiveness.

POLITICAL ACTION is the act of helping a specific candidate who would be selected by the constituent physicians of the particular candidate—helping with your hands and dollars. (Example: Purchasing TV time, paying for newspaper ads, other financial contributions to assist in the election of a particular candidate.) This would be paid for from a second fund in which ONLY MEMBERSHIP DOLLARS could be deposited. We are thus limited by the Federal Corrupt Practices Act. SCALPEL and AMPAC have two funds.

Your Medical Association (SCMA) and your Political Action Committee (SCALPEL) wish to create and maintain a climate within governmental circles that will permit you, uninhibited, to practice medicine in such a way as to render high quality medical care to all the people of our State. Your association works through its lobbying to make the PRESENT CONGRESS WISE in the affairs of which we are knowledgeable. Your PAC's work to elect men to the NEXT CONGRESS who are already wise.

Quite frankly, gentlemen, we need corporate funds for Education; we need membership, "Hard Dollars", to support good candidates. If it develops that all of you are satisfied with your own good Congressman, we'll be able to help a neighboring state, through AMPAC, elect a good Congressman. It really doesn't matter, you know, where favorable votes come from. All that we need is 51% who believe in the free enterprise system and think as we do. So, how about a contribution—$20.00 to $99.00? Make your check payable to SCALPEL—give it to your Society Secretary for transmittal or mail directly as you do your Medical Association dues.

DON'T BE DISCOURAGED the ball game is not over yet—How about chipping in before the 4th Quarter ends?

You express an opinion when you VOTE—So REGISTER.

Harrison L. Peeples, M.D.
Director, SCALPEL
First Congressional District

News

The average life expectancy for a South Carolinian is 66.41 years, the shortest in the nation.

The national average is about 70 years.

Dr. E. Kenneth Aycock, director of the State Board of Health, told a news conference that a large number of strokes and heart diseases, primarily among Negroes, are largely responsible for the short life expectancy in South Carolina.

He said it points to a lack of knowledge of health among members of the state's lower economic group.

"We must have a more active program of health education in the schools and in adult education classes."

Dr. Aycock said about half the deaths each year in South Carolina are unnecessary. He said modern science and adequate health care and knowledge could have cut the death rate by half.

Dr. Aycock said heart diseases, strokes, cancer and accidents accounted for 62 per cent of the deaths in South Carolina in 1965.

Hospital News

The new $1 million Doctors Memorial Nursing and Convalescent Center on Highway 81, Anderson, was officially opened in October. Drs. Robert and Margaret DeVore are head of Doctors Memorial.

A new Speech and Hearing Clinic was opened at Anderson Memorial Hospital in September. The clinic, a non-profit organization, was originally planned by members of the Board of directors of the Anderson Crippled Children's Society. The clinic will provide speech improvement classes for school-age children, as well as therapy for children with hearing losses or with special problems such as cleft palate, cerebral palsy, mental retardation and brain injuries.

Loris Community Hospital has opened its new 40-room extended care department. The hospital complex, which now includes a general hospital, nursing home and extended care unit, has a total bed capacity of 127.

Postgraduate Seminar on Internal Medicine

for Internists and Family Physicians

This is the first of a series of Seminars planned by the Department of Medicine. The subjects presented will be studied in some depth, but no effort will be made to cover a particular disease or subspecialty comprehensively. Diagnosis and management will be emphasized, and there will be time for audience participation and questions.

Supper on the 8th of February and lunch on the 9th of February will be provided so that the time available can be utilized fully. Advance registration is requested so that plans for meals can be made.

All sessions will be held in the Amphitheater, Medical College Hospital. Registrants will receive parking permits by mail.

REGISTRATION: Address all correspondence to: Office of Development, Medical College of S. C., Charleston, S. C. 29401

FEE: $10.00. Make check payable to Medical College of S. C.

PROGRAM

Thursday, February 8, 1967

12:30 Registration.

1:00 Treatment of Renal Failure—A. Williams, M.D. & Brian Smith, M.D.
Discussion of early care of the patient in renal failure, use of artificial kidney and peritoneal dialysis, and selection of patients for organ transplantation.

1:45 Questions and Answers.

2:00 Bacterial Endocarditis—Louis P. Jervey, M.D.
Rare forms of endocarditis and adequate bacteriologic diagnosis as guide to treatment will be emphasized.

2:30 Questions and Answers.

2:45 Coffee Break.

3:00 Unknown ECG—P. C. Gazes, M.D.
Audience will participate in diagnosis, using electrocardiograms and case histories presented.

3:45 Hypertension—Arthur Williams, M.D.
Evaluation of the hypertensive patient will be emphasized.

4:15 Selection of drugs for the hypertensive—Brian Smith, M.D.

4:45 Questions and Answers.

5:30 Supper.

7:00-8:30 P.M. (Program will end on time).
Angine Pectoris.
Diagnosis—Exercise ECG's—P. C. Gazes, M.D. Coronery Arteriography—Grady Hendrix, M.D.
Treatment—Drug Therapy—P. C. Gazes, M.D.
Surgical Techniques—Charles Summerall, M.D.

PROGRAM

Friday, February 9, 1967

8:30 Registration.

9:00 Case presentations: Rheumatoid Arthritis, Lupus, Dermatomyositis—Walter M. Bonner, M.D.
Typical cases will be presented to explain the different approach to treatment of these diseases.

9:45 Hemolytic Anemias—Stuart N. Richardson, M.D.
Recognition of hemolytic disease and indication for splenectomy.

10:15 Questions and Answers.

10:30 Coffee Break.

10:45 Multiple Myeloms & Dysproteinemias—Charlton deSaussure, M.D. Stuart Richardson, M.D. Walter Bonner, M.D.
Illustrative cases will be presented and techniques for study of serum proteins will be reviewed.

11:30 Questions and Answers.

11:45-1:00 Lunch.

1:00 Peripheral clues to Gut Problems—Vince Moseley, M.D.
Signs and symptoms gained from study of other organ systems.

1:30 Gastrointestinal Bleeding—Clarence Legerton, M.D.
Emphasis will be on early diagnosis and care in massive G. I. Bleeding.

2:15 Questions and Answers.

2:30 Cokes.

2:45 Radioisotope Scanning in Diagnosis—Maria Buse, M.D.
Isotope scans of liver, pancreas, etc. will be correlated with clinical histories.

3:15 Oral Hypoglycemic Agents for Diabetes—John Buse, M.D.
Selection of patients for treatment with these drugs will be emphasized.

3:45 Questions and Answers.

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Mr. Arthur St. J. Simons, II
Administrator

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Precautions: Tuinal should be used cautiously in patients with decreased liver function, since prolongation of effect may occur.

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Overdosage: C.N.S. depression. Symptoms—Depression of respiration and of superficial and deep reflexes, slight constriction of the pupils (in severe poisoning, dilation), decreased urine formation, lowered body temperature, coma. Treatment—Symptomatic and supportive (gastric lavage; intravenous fluids; maintenance of blood pressure, body temperature, and adequate respiration). Dialysis may speed removal of barbiturates from body fluids.

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[031767]

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Greenville Health, Science Fair Planned

Plans for the largest South Carolina Health and Science Fair ever are progressing for exhibition, April 3, 4, 5 and 6 in Textile Hall, Greenville.

The fair which drew about 55,000 in attendance last April, surpassed attendance at any other fair of its kind in the United States including fairs in Cleveland, Ohio; Philadelphia. Pa.; Durham and Goldsboro, N. C.

The educational, non-profit exposition offers displays and demonstrations on physical health, medical science, and science and research, health care developments and programs.

The three-fold purpose of the fair is to offer opportunity to inform young people about the possibilities and opportunities for health and science careers and educational programs; provide teachers, parents and the people of the community with information on health and science including medical science, careers and programs; and to stimulate interest and increase the public knowledge and understanding of the achievements and progress in community health, science, medicine, health and hospital care.

New Forms for Birth and Death Certificates

New Standard Certificates of Birth, Fetal Death and Death will be put into use in South Carolina and throughout the nation on January 1, 1968.

The new certificates were approved by the Executive Committee of the South Carolina State Board of Health in April following careful study by many health professional groups at local, state and national levels. They have been designed to meet present and future needs for registration, identification, legal, medical and research purposes and will also contribute to the development of comparable statistics among the states.

Major changes include the addition of new items and the relocation of existing items to the confidential section of the new certificates which is available only for medical and health use and will not be issued on certified copies.

Relocated within the confidential section of the Birth and Fetal Death Certificates is information on the race of mother and father and the number of previous deliveries. Among the new information to be required will be the education completed by mother and father, date of last live birth or fetal death, date of beginning of last normal menses, month of pregnancy when prenatal care began and number of prenatal visits. Only minimal changes have been made on the new Death Certificate.

The additional confidential information required is expected to add new dimensions to public health studies planned by the State Board of Health's Division of Maternal and Child Health and other professional groups. Studies relating the educational levels of parents to fertility, those relating education to child-spacing or those showing the relationship of length of prenatal care to outcome of pregnancy are examples of information which might be obtained from the new certificates to help physicians provide better care for their patients and to aid in the planning and conduct of new or expanded public health programs.

Because of the need for standardized information, every physician in the state has been provided copies of the new certificates along with a handbook of instructions. Supplies of the certificates are being forwarded to hospitals and may be ordered in quantity for physicians, offices through Mrs. Doris M. Byars, State Board of Health, Columbia, South Carolina 29201.

New Booklets

We quote from a new booklet:

"If all the money being poured into the field of mental retardation were allocated on the basis of the prevalence of the various degrees of the syndrome, the mildly retarded would get the vast majority of it. Not only do they not get it, however, but they probably never will.

"The more severely retarded child arouses strong emotional responses ranging from aversion to sympathy. The severely retarded individual is a pathetic creature, human but not quite. He is so unlike most of us that we cannot identify with him. Instead, we develop emotional reactions like those of his parents, stirred to do something to assuage our guilt and to prevent such a thing from happening again. The mildly retarded child, on the other hand, is one with whom we can identify because he is more like us. This similarity adds to his burden because it places responsibilities on him that we never impose on the severely retarded. If he will not learn, we are irked. We feel he can learn and behave if he will only try. We find it difficult to estimate the degree to which it is appropriate to make demands of him.

"It is not difficult, therefore, to see why so much energy, time, and money are devoted to the seriously retarded while the mildly retarded continue to be proportionately neglected . . . A great deal can be done (to meet the problems of the mildly mentally retarded) that can lead to very gratifying results both for the physician and the patient. It is essential that the growing body of knowledge in this field be shared as rapidly as possible so that it can be more widely and more effectively utilized."

Copies of Mild Mental Retardation: A Growing Challenge to the Physician, GAP Report No. 66, may be obtained at $1.00 each from the Publications Office, Group for the Advancement of Psychiatry, 104 East 25th Street, New York, New York 10010. Quantity prices are available upon request.

"Uses of a Wine In Medical Practice," a compendium of 27 years of research studies on wine's health values conducted at leading universities and research institutions throughout the world has just been published by the Wine Advisory Board, an agency of the California State Department of Agriculture in the fifth edition. It will be sent without charge to members of the medical profession who request it from the Board, 717 Market St., San Francisco, California 94103.

Current methods of treating cancer by surgery, radiotherapy and chemotherapy are described in a 20-page booklet, "Treating Cancer," issued for the general public by the Public Health Service, U. S. Department of Health, Education, and Welfare. A general revision of an earlier version by the same title, it was prepared by the National Cancer Institute, National Institutes of Health.

Single copies of "Treating Cancer" (PHS Publication No. 690) are available without charge from the Public Health Service, Washington, D. C. 20201. The booklet may be bought in quantity from the Superintendent of Documents, U. S. Government Printing Office, Washington, D. C. 20402 at 20 cents a copy.

Manual on Alcoholism, the American Medical Association, Chicago; 87 pages, 50 cents. In 87 pages, the AMA's new manual defines alcoholism and sets out its causes. It describes the metabolism and pharmacology of alcohol, and offers suggestions on diagnosis and the physical, psychological, and sociological aspects of treatment.

In plain language, it tells what an alcoholic is and is not, and what physicians can do to help him.

The manual is available from the Order Handling Unit, American Medical Association, 535 N. Dearborn St., Chicago, Illinois 60610. Prices are 50 cents a copy in the U. S., its possessions, Mexico, and Canada (40 cents a copy for medical students, interns and residents in those countries), and 60 cents in all other countries.

HEALTH CARE GIVEN AT HOME

E. KENNETH AYCOCK, M.D., M.P.H.
State Health Officer

Today, as never before, our nation faces the immensely complex problem of developing, expanding, and coordinating health-care services to meet the needs of the increasing number of ill and disabled in our population. This is especially true in the area of home care—where the patient does not need intensive around-the-clock care of a hospital or institution but does need skilled intermittent care and cannot be treated effectively on an outpatient basis.

Increased recognition by the medical profession of the need to reexamine and improve traditional methods of delivering health-care services has resulted from the changing age-composition of the population and the proportionate increase in long-term illness and disability.

The increase in prevalence over the past half century of such chronic diseases as hypertensive and arteriosclerotic heart disease, cerebrovascular disease, arthritis, neurological disorders, malignant disease, and pulmonary disorders has expanded demand for long-term medical and supportive care.

Many of these diseases after a dramatic, acute phase, are followed by long periods of convalescence, rehabilitation, and supportive care, often punctuated by additional acute episodes. Congenital defects in structure or metabolism and disabilities resulting from accidents also contribute their share of long-term-care problems.

These diseases or disabilities present difficult problems of medical, social, and economic significance. The long time involved in treatment, with resulting social and financial burdens on both the individual and society, necessitates that physicians become concerned with optimum methods by which needed services and facilities can be furnished to the patient.

For the acute phases, the complex, costly services of the general hospital are often necessary. In the period of disability following the acute phase, hospital stay on a continuous basis frequently is neither necessary nor desirable.

For these patients who do not need hospital or nursing home care but do need skilled, intermittent care, the provision of home health services constitutes a logical extension of the physician's therapeutic arm. South Carolina is 47th among the states in the ratio of physicians to population and is therefore in great need of extending the services of its physicians.

Committees of the South Carolina Medical Association have recognized the need for home health services for a number of years, and the Association at its annual meetings in 1960, 1961, and 1962 approved the recommendations of its Committee on the Care of the Aging that the State Board of Health establish home nursing care in every county of the State. Public health nurses of the State Board of Health have been giving care on a limited basis to the sick in their homes in cooperation with private physicians for a long time, but special emphasis has been placed on this since 1960. Two small Visiting Nurse Associations in the State have also provided home nursing care.

With the advent of Medicare, the Home Health Services Subdivision of the State Board of Health was certified as a home health agency to provide home health services for persons under the care of a physician, *under a plan for furnishing such services established and periodically reviewed by the patient's physician.* The services are rendered by the county health departments on a fee-for-service basis. In order to participate, each local health department must meet certain conditions of participation.

In addition to providing skilled nursing service, the local health department must provide at least one other therapeutic service—which may be physical therapy, speech therapy, occupational therapy, medical social service, or the services of a home health aide. Thirty-three counties have met the conditions and are participating. Of these, eleven offer physical therapy, six offer speech therapy, four offer occupational therapy, and twenty offer services of a home health aide. At present, the home health services program is on a shoestring basis, primarily utilizing personnel already fully occupied with public health duties, because insufficient funds were available to employ adequate staff. We hope in the next six years through physician's recognition of the values of such services and hence utilization to achieve optimal staffing in every county.

Physicians may consult their local health department to learn what services are offered in their county.

A local advisory committee, which must include at least one physician and one nurse plus other persons in the community who are knowledgeable in health affairs, must approve and periodically review the policies of the local home health agency.

The referring physician prescribes the plan of treatment for the patient and reviews the plan every two months. The development of home health services is by no means an attempt to supplant the attending physician. Actually, these are supplementary services which the private physician controls in the implementation of his treatment plans for his homebound patients. Such services may make it possible for some patients to be treated in the familiar and therapeutic environment of home who would otherwise have to be given more expensive and more impersonal care in a nursing home or hospital.

When a patient is referred by the physician for home health services, the public health nurse visits the home, evaluates the home situation, observing the emotional and social atmosphere of the home which influences the patient's progress and the patient's and family's attitude toward his illness, and sends a report to the referring physician. She carries out the orders and suggestions of the physician and will teach a responsible member of the family how to give certain treatments, medications, and personal care to the patient, and will supervise this family member in giving care. She also coordinates the nursing care of the patient with the other services involved. Her primary responsibility in the home is to give, teach, and supervise care of an individual patient within the family setting. She also observes the health needs of other members of the family and helps them to see the importance of seeking medical supervision in order to maintain optimum health.

The home health aide is similar to the nursing aide in institutions. Home health aide services are supportive services which are required to provide and maintain normal bodily and emotional comfort and to assist the patient toward independent living in a safe environment. They must work under a physician's orders and with supervision by a registered nurse or therapist.

The home health services program is not limited to a single category of patients. It provides services to those under 65 years of age as well as to those covered by Medicare, to those patients who are acute as well as long-term, convalescent as well as terminal, mildly disabled as well as severely handicapped. Referrals are accepted by the health department for any patient whom the physician feels will benefit from these services in the home if the agency's personnel and resources are adequate and suitable to provide the services required by the patient.

Home health services are provided on a fee-for-service basis. Patients not covered by Medicare are billed for the cost of the visit.

The *hospital insurance* part of Medicare covers the cost of the home health services if the physician prescribes the services within 14 days after the patient has been in a hospital or extended care facility. For each "spell of illness," hospital insurance can pay the cost of up to 100 home health visits in the year after the patient's most recent discharge from a hospital or extended care institution if he were hospitalized for at least three days and the treatment is for a condition for which he received care in the hospital or extended care institution. Hospital insurance pays all of the reasonable costs of the home health services received by the patient.

If the patient is not eligible for home health services under the hospital part or has exhausted his entitlement under the hospital part, the services are covered by the *medical insurance* part of Medicare—provided the patient had signed up for protection under the medical insurance program. The medical insurance pays for 80% of the reasonable costs of up to 100 home health visits in each calendar year after the patient pays the $50 deductible applicable to all benefits received under medical insurance. The patient is billed for the remaining 20%.

Home health services are measured in visits. A visit is a personal visit to the residence of the patient by a nurse, physical therapist, speech therapist, home health aide, medical social worker, or occupational therapist from the home health agency to provide him a health service. A visit is also counted if the patient goes to a hospital or elsewhere to receive a covered service, under arrangements made by the home health agency, because equipment that cannot be moved to his home is involved in providing the service. If one or more persons from the home health agency visit the patient to provide a single service, it counts as one visit. If two or more persons from the agency make the visit and provide different services, each service is counted as a visit. If the patient receives home health services outside his home, one visit is counted for each service received.

The provision of medical supplies (other than drugs and biologicals) and the use of medical appliances are also covered by Medicare.

When a fully staffed, coordinated home health services program is available, there are a number of advantages to the physician.

One is that it provides for continuity of service. Patients do not leave the hospital in fairly good condition, only to lapse into a "no care" state and deteriorate into their prehospital status or worse.

It also provides complete and total care, with such services as specialty consultations in any field of medicine or dentistry, active social service participation and aid, home nursing, physical therapy, occupational therapy, speech therapy, dietitian service, laboratory, x-ray, ECG and EEG, medication of all sorts, both oral and parenteral, oxygen, dressings, equipment, and devices such as hospital beds, commode chairs, trapeze frames, catheters, etc., as well as patient transportation, housekeeper help, and recreational assistance.

Coordinated home care enables the physician to obtain all the ancillary services he may want by a simple single telephone call to the home health agency. It shortens the stay in the hospital and reduces greatly the frequency of readmission. This achieves very much better bed utilization and frees beds for acute cases. It also provides for guaranteed prompt readmission. This is an extremely important factor in areas where hospital beds are in acutely short supply.

It provides for more complete physical and vocational rehabilitation, where this is possible. Naturally, terminal cases of malignant and certain degenerative illnesses can only be made comfortable with what is left of their physical stamina. But certain cases are potentially salvageable.

It gives the physician a more rounded and comprehensive concept of the patient and family through the team approach and through conference with the Public Health Nurse who is in charge of rendering the home nursing care. Often the patient will confide in the nurse or social worker and give her some piece of important information about which the physician has not been aware.

Finally, this kind of a program provides the possibility of training of housestaff and medical students and enables them to see patients in the natural surroundings of their homes, rather than in the artificial hospital surroundings. The physician in training sees patients, as he will in actual practice, and gains a more complete understanding of the actual conditions under which his patients live.

Of course, such a program necessitates the physician's willingness to see the patient at home instead of having him conveniently in the central locale of the hospital, and more time and effort are required in keeping of records and reports than for a physician otherwise seeing his patient at home.

According to the National Health Survey, about 0.5% of the population is confined to home because of chronic illness. The incidence of this limitation of mobility rises rapidly after the age of forty, and it is estimated that 10% of people over 65 are in need of home health care. Home health services are especially needed in rural areas where other health resources are limited.

One of the goals of your State Board of Health is to develop home health services integrated into a comprehensive health program providing continuity of care so that they will be available to and used by every person who would benefit from them. It is felt that this program must be developed gradually as the benefits of home health services become better appreciated by physicians and their patients.

Physician support of the home health services program is extremely important. There is a need for his support in referring patients to the program, in cooperatively developing a treatment plan with the local Public Health Nurse or home care team, and in being responsible for coordination of the care services rendered.

CORRECTION

Dr. Aycock calls to our attention an error in the manuscript of his paper "Title XIX, Medicaid", which appeared in the November issue on pages 426 and 427. The figure given on page 426, third paragraph in the second column, line 5, should be 1,015,000 instead of 1,500,000.

SOUTH CAROLINA COMMUNITY PESTICIDE PROGRAM*

J. F. FINKLEA**
J. E. KEIL†
R. L. PIETSCH‡

Introduction

The term "pest" may embrace a great number of living creatures, including man himself. However, this communication will restrict the word "pesticide" to those chemical substances used to control insects, weeds, rodents, fungi or nematodes, i.e. insecticides, herbicides, rodenticides, fungicides and nematocides. Pesticides are necessary and of unquestioned economic value in agriculture, industry and disease prevention. For this reason, pesticide usage has increased astronomically in the last two decades and promises to increase further in the future. Thus the safe use of pesticides has become an increasingly important area for public concern. Fortunately, industry has long been cognizant of the possible deleterious effects of pesticides, especially their acute toxicity and, more recently, their chronic toxicity.

The South Carolina Community Pesticide Program is a partnership of industry and the health professions that is primarily intended to determine the health effects, if any, of long term pesticide exposure.

This research project is being carried out by the Medical College of South Carolina and the South Carolina State Board of Health and is one of fourteen such cooperative studies supported by the USPHS.

Types of Studies

Acute Toxicity Cases: The community pesticide program will work through the two existing poison control centers in South Carolina to collect data about the frequency of pesticide poisoning and to serve as a consultant to these centers. A team from the program would like to collect immediate and follow-up information about each hospitalized patient with pesticide poisoning. In addition, the program can furnish diagnostic aids to practicing physicians. These aids include blood cholinesterase and urine paranitrophenol levels in organophosphate poisoning, blood or urine metabolites in organochlorine poisoning, and blood or urine metals in herbicides or rodenticide poisoning.

Occupational exposure groups: Stable industrial or farm employees that synthesize, formulate or apply pesticides as well as a control group, will be asked to volunteer for studies which will include medical history, physical examination, and pertinent laboratory tests. Periodic follow-up visits will be made to these volunteers over a period of several years. Any abnormalities found on these surveys will be forwarded to a private physician designated by the volunteer. Industry will be apprised of any evidence of safety precaution breakdown among its employees but the program has absolutely no regulatory function and specific plants are not identified in cooperative reports.

Tissue Monitoring: Tissue specimens and blood from coroner's cases in Charleston County will be monitored for pesticide residues as a part of a national program. Any case with unusually high residues will be investigated by a field team.

Other Studies: These will include an updated profile on pesticide usage in South Carolina, certain environmental residue determinations, and a basic research project on amino acid metabolism.

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*This work is supported by a Community Pesticide Program contract (PH 21-2017).

**Assistant professor of Preventive Medicine and Pediatrics-Medical College of South Carolina, Charleston, South Carolina.

†Field Studies Supervisor, South Carolina Community Pesticide Studies.

‡Lieutenant, USPHS, assigned to South Carolina Community Pesticide Studies.

Summary

The South Carolina Community Pesticide Program is a joint effort of the Medical College of South Carolina and the South Carolina State Board of Health. This project will work through industry, physicians and existing poison control centers to monitor the health of occupationally exposed workers, acute pesticide poisonings, and tissue pesticide residues. The project has no regulatory function but rather seeks to be of immediate and long term service to practicing physicians, industry, and society.

Classified Advertisement

PSYCHIATRIC RESIDENCIES FOR G.P.'s. NIMH residency training in approved three year program. Stipend $11,500 to $12,000. Applicants must have completed four years or more of practice in field of medicine other than psychiatry after an approved internship. Applicants should not be over 45. Address inquiries to Chairman, Department of Psychiatry, Medical College of Virginia, Richmond, Virginia 23219. Include curriculum vitae and recent photograph.

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DEATHS

Dr. Rudolph Farmer

Dr. Rudolph Farmer superintendent of the S. C. Tuberculosis Sanatorium at State Park died Oct. 13 in Columbia Hospital after an illness of several months.

He was born in Allendale and was a graduate of Clemson University and the Medical College of South Carolina. Dr. Farmer interned at Roper Hospital, Charleston; Presbyterian Hospital, Pensylvania and General Hospital in Spartanburg.

He later did graduate work at Trudeau School of Tuberculosis, Saranac Lake. N. Y. and Bellevue Hospital N. Y.

He came to the S. C. Sanatorium as staff physician in 1930 and in 1954 was promoted to the position he held at the time of his death. The main hospital building was named in his honor.

Dr. Leighton A. Hartzog

Dr. Leighton A. Hartzog, 83, father of the late Sen. Franklin R. Hartzog died Oct. 19.

He was born in Govan and was graduated in 1909 from the Medical College of South Carolina as valedictorian. He attended Wofford College before entering Medical College. He had practiced medicine for 57 years and was the county health doctor for Bamberg and Barnwell counties for 16 years.

He was a member of Edisto Medical Society, Seaboard Airlines Surgical Assn., S. C. Medical Assn., American Medical Assn.

New Pharmaceutical Specialties

by Paul De Haen

For detailed information regarding indications, dosage, contraindications and adverse reactions, refer to the manufacturer's package insert or brochure.

Single Chemicals—Drugs not previously known, including new salts.

Duplicate Single Products—Drugs marketed by more than one manufacturer.

Combination Products—Drugs consisting of two or more active ingredients.

New Dosage Forms—Of a previously introduced product.

NEW SINGLE CHEMICALS

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Ataraxic. Rx

Manufacturer: J. B. Roerig & Co.

Nonproprietary Name: Thiothixene.

Indications: Acute and chronic schizophrenia.

Contraindications: Circulatory collapse, comatose states, central nervous system depression due to any cause, blood dyscrasias. Not for children under 12 years.

Dosage: Must be individually adjusted. Range: 6-60 mg daily.

Supplied: Capsules—1, 2, 5 and 10 mg: bottles of 100.

DUPLICATE SINGLE PRODUCTS

CYREDIN

Hematinic. Rx

Manufacturer: The Wm. S. Merrell Co.

Nonproprietary Name: Cyanocobalamin.

Indications: Parenteral treatment of pernicious and megaloblastic anemias.

Contraindications: None known.

Dosage: 15 to 50 mcg, i.m., 2-3 times weekly until remission, then 100 mcg monthly to prevent relapse.

Supplied: Ampuls—1 mg/ml; boxes of 25 and 100. Vials—1 mg/10 ml and 10 mg/10 ml; boxes of 1 and 25.

DUPLICATE SINGLE PRODUCTS

PRINCIPEN

Antibiotic—Penicillin. Rx

Manufacturer: E. R. Squibb & Sons.

Nonproprietary Name: Ampicillin Trihydrate.

Indications: Genitourinary, respiratory, and gastrointestinal tract infections due to sensitive strains of Gram-negative bacteria. Other infections due to susceptible organisms.

Contraindications: History of allergic reactions to any of the penicillins, in infections caused by penicillinase-producing organisms.

Dosage: 250-500 mg q.i.d. in equally spaced doses.

Supplied: Capsules—250 mg. Powder for oral suspension—250 mg/5 ml.

TYBATRAN

Ataraxic. Rx

Manufacturer: A. H. Robins Co.

Nonproprietary Name: Tybamate.

Indications: Treatment of anxiety and tension components of psychoneuroses, senile agitation, depressive symptoms associated with anxiety.

Contraindications: Hypersensitivity to the drug, pregnancy.

Dosage: Adults: 250-500 mg three or four times daily. Children 6 to 12 years: 20-35 mg/kg. body weight divided into three or four equal doses. Not for children under 6 years.

Supplied: Capsules—125, 250 and 350 mg; bottles of 100 and 500.

COMBINATION PRODUCTS

ALPHOSYL SHAMPOO

Dermatologic Prep.-Coal Tar. o-t-c

Manufacturer: Reed & Carnrick.

Composition: Coal tar extract 5%. Hexachlorophene 1%.

Indications: Psoriasis and other scalp conditions, including dandruff.

Contraindications: None mentioned.

Dosage: As required.

Supplied: Tubes—2 oz.

CONSOTUSS

Cough Presparation. o-t-c

Manufacturer: The Wm. S. Merrell Co.

Composition: Each 5 ml contains: Dextromethorphan HBr 15 mg. Glyceryl guaiacolate 100 mg. Doxylamine succinate 3.75 mg. Cholorform 0.5%. Alcohol 10%.

Indications: Non-narcotic preparation for the temporary relief of cough.

Contraindications: None mentioned.

Dosage: Adults—1 or 2 tsp. q.4-6h., not to exceed 8 tsp./24 hours. Children (6-12 years)—1 tsp. q.4h., not to exceed 4 tsp./24 hours. Children (2-5 years)—½ tsp. q.4h., not to exceed 2 tsp./24 hours.

Supplied: Bottles—6 and 16 fluid ounces.

ROBITUSSIN-DM Cough Calmers

NEW DOSAGE FORM

Cough Preparation. o-t-c

Manufacturer: A. H. Robins Co.

Composition: Each lozenge contains: Glyceryl guaiacolate 50 mg. Dextromethorphan HBr 7.5 mg.

Indications: Relief of cough.

Contraindications: None mentioned.

Dosage: As directed.

Supplied: Lozenges—box of 18.

TUSSEND Tablets

Cough Preparation. Rx

Manufacturer: Pitman-Moore.

Composition: Hydrocodone bitartrate 5 mg. Phenylephrine HCl 20 mg. Chlorpheniramine maleate 4 mg.

Indications: Respiratory tract infection accompanied by exhausting cough spasms.

Contraindications: Hypersensitivity to any of the ingredients. Do not use over an extended period of time since hydrocodone may cause addiction.

Dosage: One tablet 3 or 4 times daily.

Supplied: Tablets—bottles of 100.

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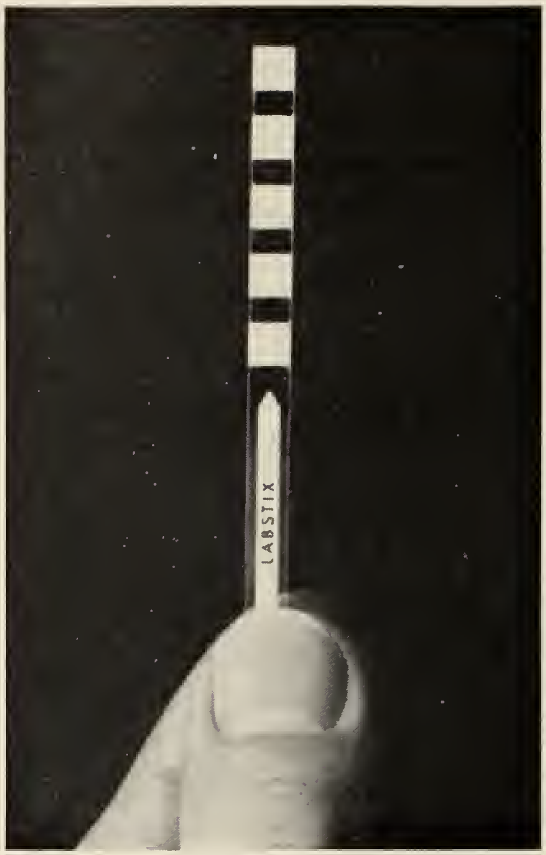

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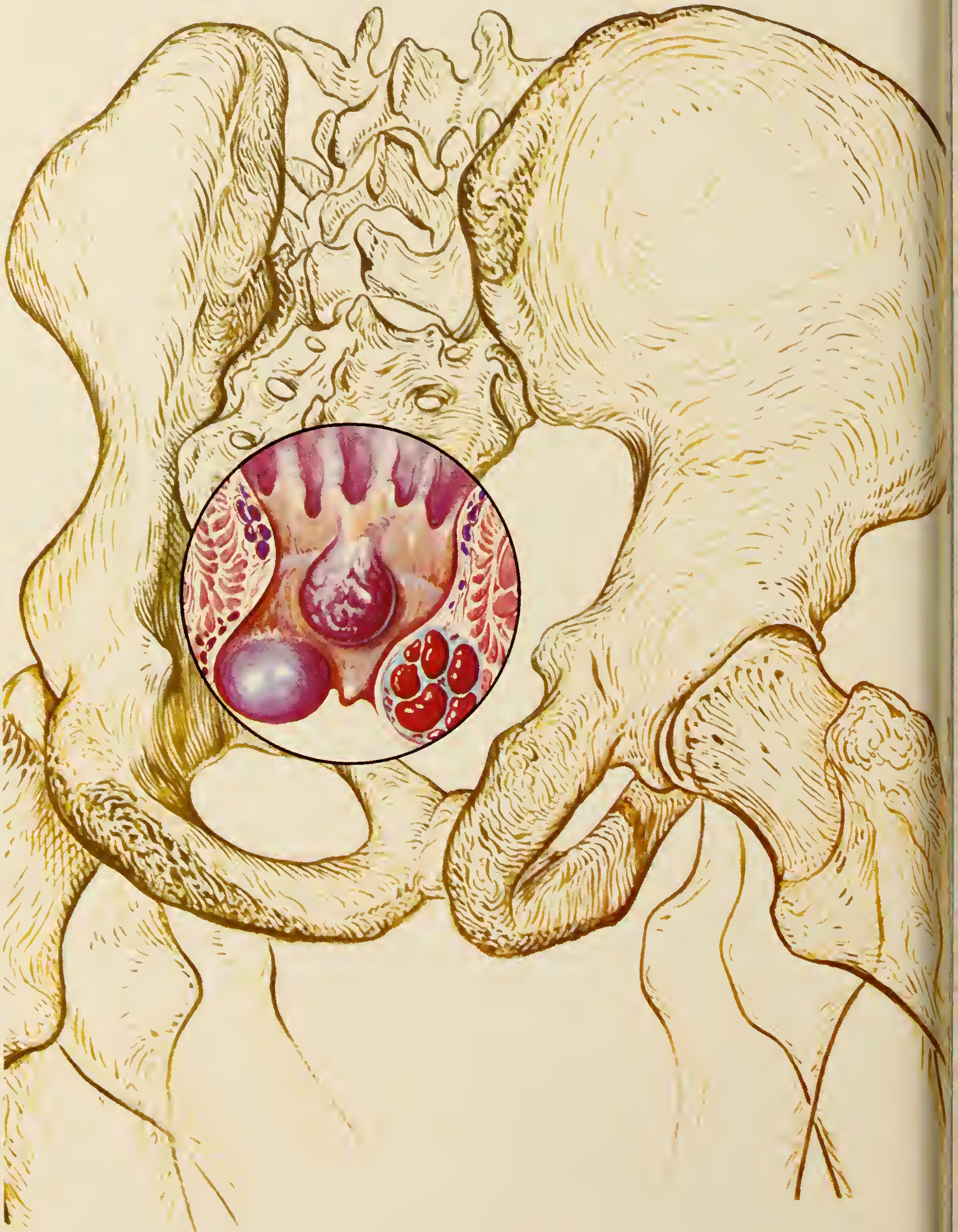

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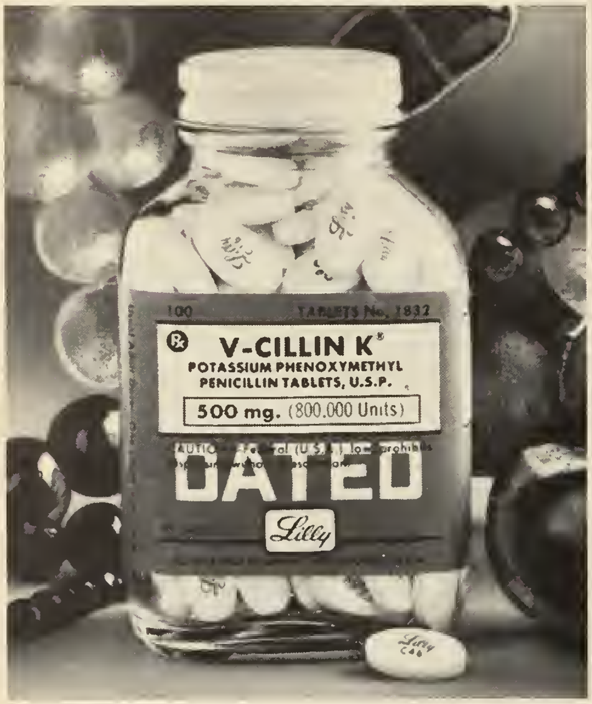
New 500 mg. tablets...a more convenient way to give high doses



Description: V-Cillin K, the potassium salt of V-Cillin® (phenoxymethyl penicillin, Lilly), combines acid stability with immediate solubility and rapid absorption. Higher, more rapid serum levels are obtained than with equal oral doses of penicillin G.

Indications: Streptococcus, pneumococcus, and gonococcus infections; infections caused by sensitive strains of staphylococci; prophylaxis of streptococcus infections in patients with a history of rheumatic fever; and prevention of bacterial endocarditis after tonsillectomy and tooth extraction in patients with a history of rheumatic fever or congenital heart disease.

Contraindication: Penicillin hypersensitivity.

Warnings: In rare instances, penicillin may cause acute anaphylaxis which may prove fatal unless promptly controlled. This type of reaction appears more frequently in patients with a history of sensitivity reactions to penicillin or with bronchial asthma or other allergies. Resuscitative drugs should be readily available. These include epinephrine and pressor drugs (as well as oxygen for inhalation) for immediate allergic manifestations and antihistamines and corticosteroids for delayed effects.

Precautions: Use cautiously, if at all, in a patient with a strongly positive history of allergy.

In prolonged therapy with penicillin, and particularly with high parenteral dosage schedules, frequent evaluation of the renal and hematopoietic systems is recommended.

In suspected staphylococcus infections, proper laboratory studies (including sensitivity tests) should be performed.

The use of penicillin may be associated with the overgrowth of penicillin-insensitive organisms. In such cases, discontinue administration and take appropriate measures.

Adverse Reactions: Although serious allergic reactions are much less common with oral penicillin than with intramuscular forms, manifestations of penicillin allergy may occur.

Penicillin is a substance of low toxicity, but it possesses a significant index of sensitization. The following hypersensitivity reactions have been reported: skin rashes ranging from maculopapular eruptions to exfoliative dermatitis; urticaria; and reactions resembling serum sickness, including chills, fever, edema, arthralgia, and prostration. Severe and often fatal anaphylaxis has occurred (see Warnings). Hemolytic anemia, leukopenia, thrombocytopenia, and nephropathy are rarely observed side-effects and are usually associated with high parenteral dosage.

Administration and Dosage: Usual dosage range, 125 mg. (200,000 units) three times a day to 500 mg. (800,000 units) every four hours. For infants, 50 mg. per Kg. per day divided into three doses.

See package literature for detailed dosage instructions for prophylaxis of streptococcus infections, surgery, gonorrhea, and severe infections.

How Supplied: Tablets V-Cillin K, U.S.P., 125 mg. (200,000 units), 250 mg. (400,000 units), and 500 mg. (800,000 units).

V-Cillin K, Pediatric, for Oral Solution, 125 mg. (200,000 units) and 250 mg. (400,000 units) per 5 cc. of solution (approximately one teaspoonful). [042567]

Additional information available to physicians upon request. Eli Lilly and Company, Indianapolis, Indiana 46206.

Lilly

701449

DORSEY "FLU-GRAM"

DON'T BE LULLED BY RELATIVE LACK OF FLU LAST WINTER. THIS WINTER BE PREPARED: WHEN THE COMPLAINTS ARE COUGH AND CONGESTION, YOU CAN RELIEVE THESE SYMPTOMS WITH TUSSAGESIC TABLETS. ONE TIMED-RELEASE TABLET AT MORNING, MIDAFTERNOON AND BEDTIME BRINGS UP TO 24 HOURS' RELIEF FROM TROUBLESOME COUGH AND STUFFED AND RUNNY NOSE. TUSSAGESIC IS THE FAMOUS TRIAMINIC FORMULA, PLUS THREE OTHER PROVED CONSTITUENTS. MAKES PATIENTS MORE COMFORTABLE. FAST. ASK YOUR DORSEY REPRESENTATIVE FOR SUPPLY OF STARTER SAMPLES, OR IF FLU IS ALREADY EPIDEMIC, PHONE COLLECT. SEE BELOW.

each

Tussagesic®

timed-release tablet contains:

Triaminic®	50 mg.
(phenylpropanolamine hydrochloride 25 mg., pheniramine maleate 12.5 mg., pyrilamine maleate 12.5 mg.)	
Dextromethorphan hydrobromide	30 mg.
Terpin hydrate	180 mg.
Acetaminophen	325 mg.

Dosage: Adults—1 tablet, swallowed whole to preserve timed-release feature, in morning, midafternoon and at bedtime. Side effects: Occasional drowsiness, blurred vision, cardiac palpitations, flushing, dizziness, nervousness or gastrointestinal upsets. Precautions: The patient should be advised not to drive a car or operate dangerous machinery if drowsiness occurs. Use with caution in patients with hypertension, heart disease, diabetes or thyrotoxicosis.

DORSEY LABORATORIES
a division of The Wander Company
Lincoln, Nebraska 68501

clip and file under "flu"

For relief of "flu-like" symptoms
Tussagesic timed-release tablets

PHONE COLLECT

For emergency starter samples
to Keith Sehnert, M.D.
Medical Director
(402) 434-6311

Fast delivery by your Dorsey
Representative

bronchodilation in asthma...without "jitters"

Most anti-asthmatic products contain ephedrine-like drugs. ELIXOPHYLLIN® never did. So, ELIXOPHYLLIN will not cause nervousness, palpitations, insomnia, or other undesirable side effects of ephedrine-like products.

Other advantages of ELIXOPHYLLIN: rapid and sustained bronchodilation • convenient, adjustable dosage • hypoallergenic • adrenergic abuse eliminated.

ELIXOPHYLLIN is theophylline in free and soluble form—resulting in rapid and dependable absorption with less risk of gastric irritation.

Adult maintenance dosage in bronchial asthma: one ounce (30 ml.) t.i.d. on arising, at 3 P.M., and on retiring. Adjust dosage to patient response. This average dosage provides continuous bronchodilation. Do not administer other xanthine preparations concurrently. May be contraindicated in peptic ulcer.

ELIXOPHYLLIN®

Each 15 ml. contains theophylline (anhydrous) 80 mg.; alcohol 20%

Sherman Laboratories

Detroit, Michigan 48211

If hypothyroidism leaves your patient feeling like this...

consider

LETTER®

(SODIUM LEVOTHYROXINE, ARMOUR) TABLETS

Synthetic Thyroid Replacement Therapy

Letter® provides all the advantages of the synthetically pure chemical sodium levothyroxine. Dosage is precise and potency is consistently uniform.

and

Letter® is micronized to provide maximum opportunity for full absorption and clinical response.

In addition Letter® is distinctively color coded with an identifying number stamped on each tablet to provide accurate dosage control.

Indications: Hypothyroid conditions. **Contraindications:** Thyrotoxicosis, acute myocardial infarctions unless associated with hypothyroidism. In hypothyroidism with hypoadrenalism coadministration of corticoids with LETTER® is recommended. **Precautions and Side Effects:** Excessive dosage may result in diarrhea, cramps, palpitation, nervousness, rapid pulse, sweating. If symptoms appear, discontinue medication for several days, then reinstitute at a lower level. Since myxedema patients with heart disease may suffer seriously from abrupt increases in dosage, caution should be exercised in adjusting dosage. **Dosage:** Generally, the initial adult dosage is 0.1 mg. daily. This may be increased in small increments every one to three weeks until proper metabolic balance is achieved. **Available:** Bottles of 100 tablets, in six potencies: 0.025 mg. (violet), 0.05 mg. (peach), 0.1 mg. (pink), 0.2 mg. (green), 0.3 mg. (yellow), and 0.5 mg. (white).

ARMOUR PHARMACEUTICAL COMPANY • CHICAGO, ILLINOIS

ACID & AIR

DUAL PROBLEM IN PEPTIC ULCER

Relief of hyperacidity is still a primary goal in the treatment of peptic ulcer. And antacids are the most widely used means of achieving this relief. But antacids alone cannot influence the distention and bloating which so often add to ulcer distress.

THIS IS WHY MYLANTA® PROVIDES:

the two most widely used antacids—magnesium and aluminum hydroxides—to help secure rapid acid neutralization with little chance of laxation or constipation;

PLUS

the defoaming action of simethicone—to help relieve the painful gas symptoms which often accompany peptic ulcer.

Mylanta®

antacid therapy plus an added benefit

nonfatiguing flavor/smooth pleasant texture; both assure patient cooperation during long-term therapy.

Stuart Division of / ATLAS CHEMICAL INDUSTRIES, INC. / Pasadena, Calif.

Before prescribing, see complete prescribing information in SK&F literature or *PDR*. A brief precautionary statement follows.
Contraindications: Glaucoma, prostatic hypertrophy, stenosing peptic ulcer, pyloroduodenal obstruction, or bladder neck obstruction.
Precautions: Use cautiously in the presence of hypertension, hyperthyroidism, coronary artery disease; warn vehicle or machine operators of possible drowsiness.
Usage in Pregnancy: Use cautiously, especially in the first trimester. *Note:* The iodine in isopropamide iodide may alter PBI test results and will suppress I^{131} uptake; discontinue 'Ornade' one week before these tests.
Adverse Reactions: Drowsiness; excessive dryness of nose, throat or mouth; nervousness; insomnia. Other known possible side effects of the individual ingredients: nausea, vomiting, diarrhea, rash, dizziness, fatigue, tightness of chest, abdominal pain, irritability, tachycardia, headache, difficulty in urination. Thrombocytopenia, leukopenia and convulsions have been reported but no causal relationship has been established.

a stuffy nose
is no
laughing matter

Ornade® Trademark

Each capsule contains 8 mg. of Teldrin® (brand of chlorpheniramine maleate), 50 mg. of phenylpropanolamine hydrochloride, and 2.5 mg. of isopropamide, as the iodide.

Spansule® Capsules
brand of sustained release capsules

each one can
give him all-day
or all-night relief

SK&F Smith Kline & French Laboratories

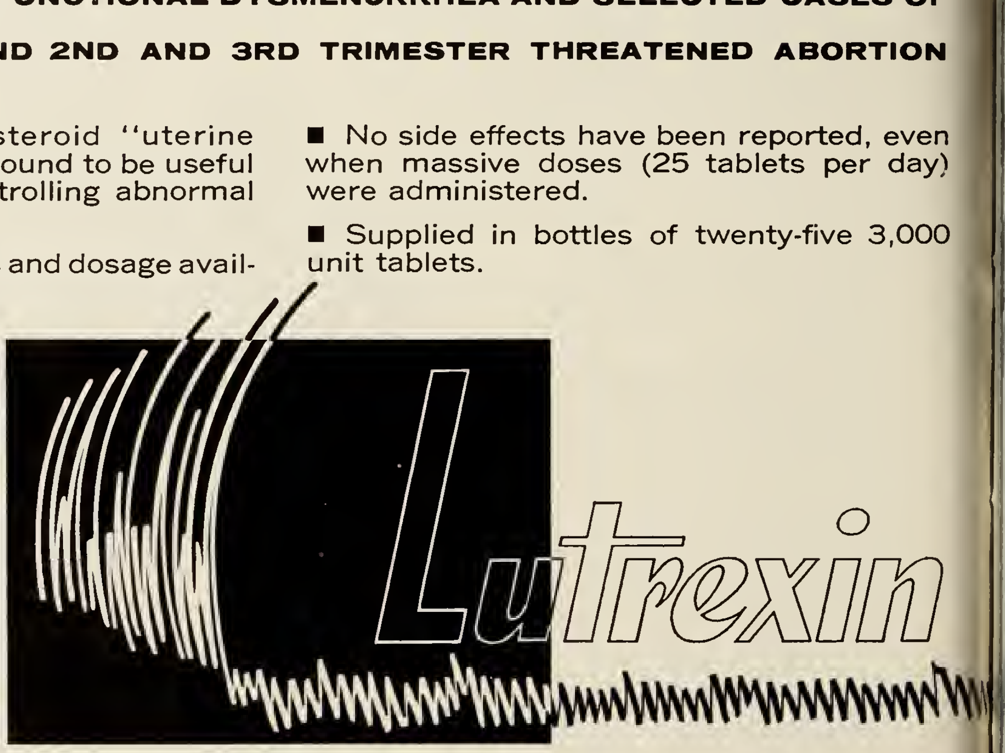
Lutrexin®

HW&D BRAND OF LUTUTRIN

3000 UNIT TABLETS

IN THE TREATMENT OF FUNCTIONAL DYSMENORRHEA AND SELECTED CASES OF PREMATURE LABOR AND 2ND AND 3RD TRIMESTER THREATENED ABORTION

- LUTREXIN, the non-steroid "uterine relaxing factor" has been found to be useful by many clinicians in controlling abnormal uterine activity.
- Literature on indications and dosage available on request.
- No side effects have been reported, even when massive doses (25 tablets per day) were administered.
- Supplied in bottles of twenty-five 3,000 unit tablets.



(In vivo measurement of Lutrexin on contracting uterine muscle of the guinea pig.)

HYNSON, WESTCOTT & DUNNING, INC. · HW&D · BALTIMORE, MARYLAND 21201

(LTR23)

MORNING STIFFNESS EASED LAST NIGHT

(She took Persistin®
instead of aspirin)

Persistin treats morning stiffness and pain the night before.

Persistin is a unique salicylate which combines the prompt analgesic action of aspirin to encourage early sleep with the proven, persistent action of salicylsalicylic acid to permit uninterrupted sleep. Three Persistin tablets at bedtime yield therapeutic serum salicylate levels on arising which are well within the range of effective salicylate therapy for the relief of pain and stiffness in arthritis.

Thus, therapy with Persistin allows many arthritics to dress more quickly and easily, and face the morning optimistically.

Persistin is also valuable for *day-long control* of the pain and discomfort of arthritis.

DOSAGE: *To relieve morning stiffness and pain*—when salicylates have not been taken during the day, an adult dose of three tablets at bedtime is suggested.

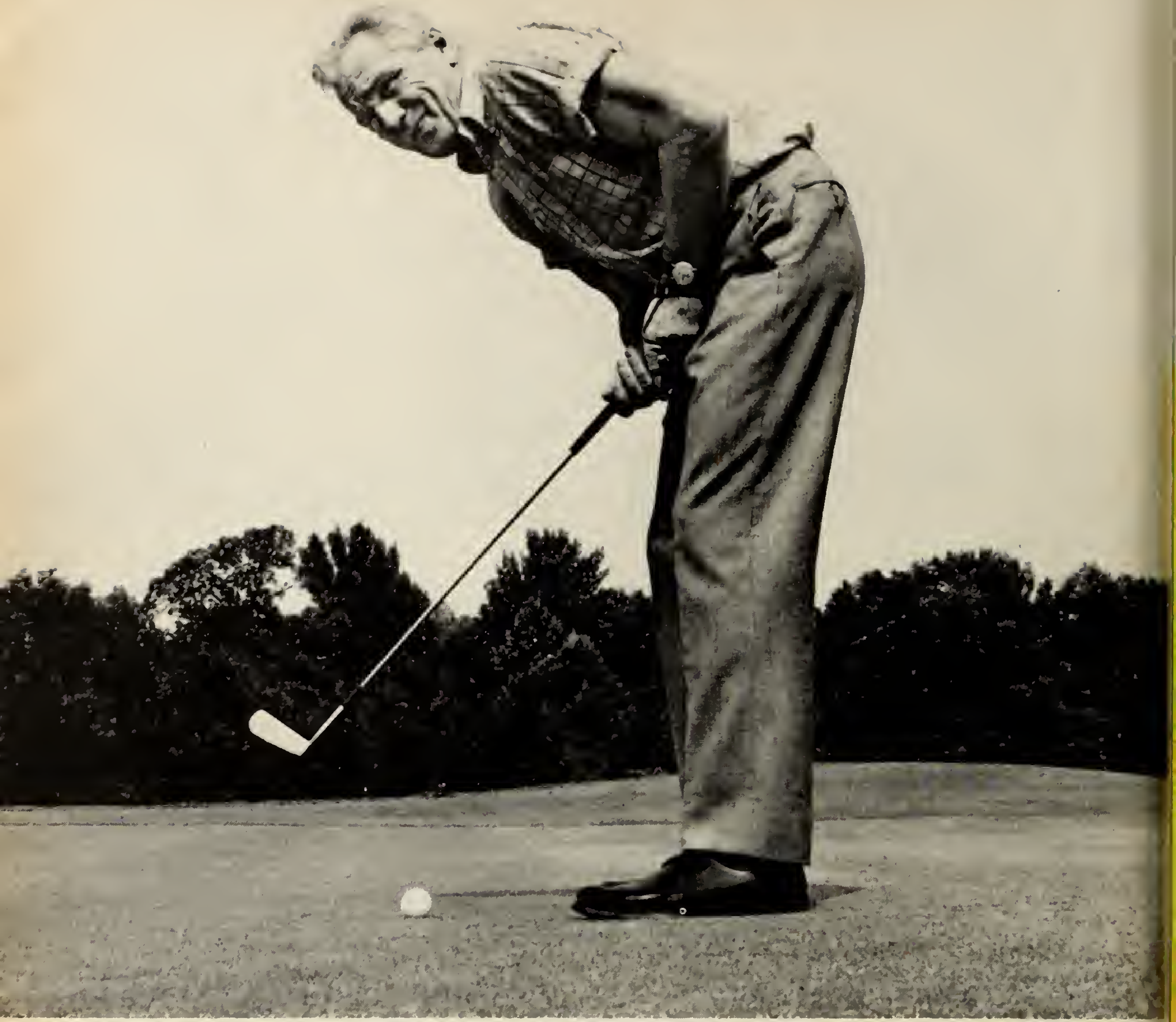
For 24-hour control of pain: Adults up to 160 lbs.-one tablet after each meal and one at bedtime. Adults over 160 lbs.-one tablet after each meal and two at bedtime.

PRECAUTION: Other salicylates should not be taken concurrently. Do not exceed recommended doses.

PERSISTIN®

salicylsalicylic acid 7½ gr. (485 mg.)-aspirin 2½ gr. (160 mg.)

Sherman Laboratories
Detroit, Michigan 48211



in the bronchitis – emphysema syndrome ...bronchodilation without pressor effects

Most bronchodilators for use in pulmonary emphysema contain ephedrine-like drugs. ELIXOPHYLLIN® never did. So, ELIXOPHYLLIN will not cause tachycardia, palpitations, nervousness, insomnia, or other undesirable side effects of ephedrine-like products. Even patients with hypertension, cardiac insufficiency, hyperthyroidism, prostate hypertrophy and glaucoma can take ELIXOPHYLLIN.

Other advantages of ELIXOPHYLLIN: rapid and sustained bronchodilation • proven increase in pulmonary function • adrenergic abuse eliminated.

ELIXOPHYLLIN is theophylline in free and soluble form—resulting in rapid and dependable absorption with less risk of gastric irritation.

Adult maintenance dosage in bronchitis and pulmonary emphysema: one ounce (30 ml.) t.i.d. on arising, at 3 P.M., and on retiring. Adjust dosage to patient response. This average dosage provides continuous bronchodilation. Do not administer other xanthine preparations concurrently. May be contraindicated in peptic ulcer.

ELIXOPHYLLIN®

Each 15 ml. contains theophylline (anhydrous) 80 mg.; alcohol 20%

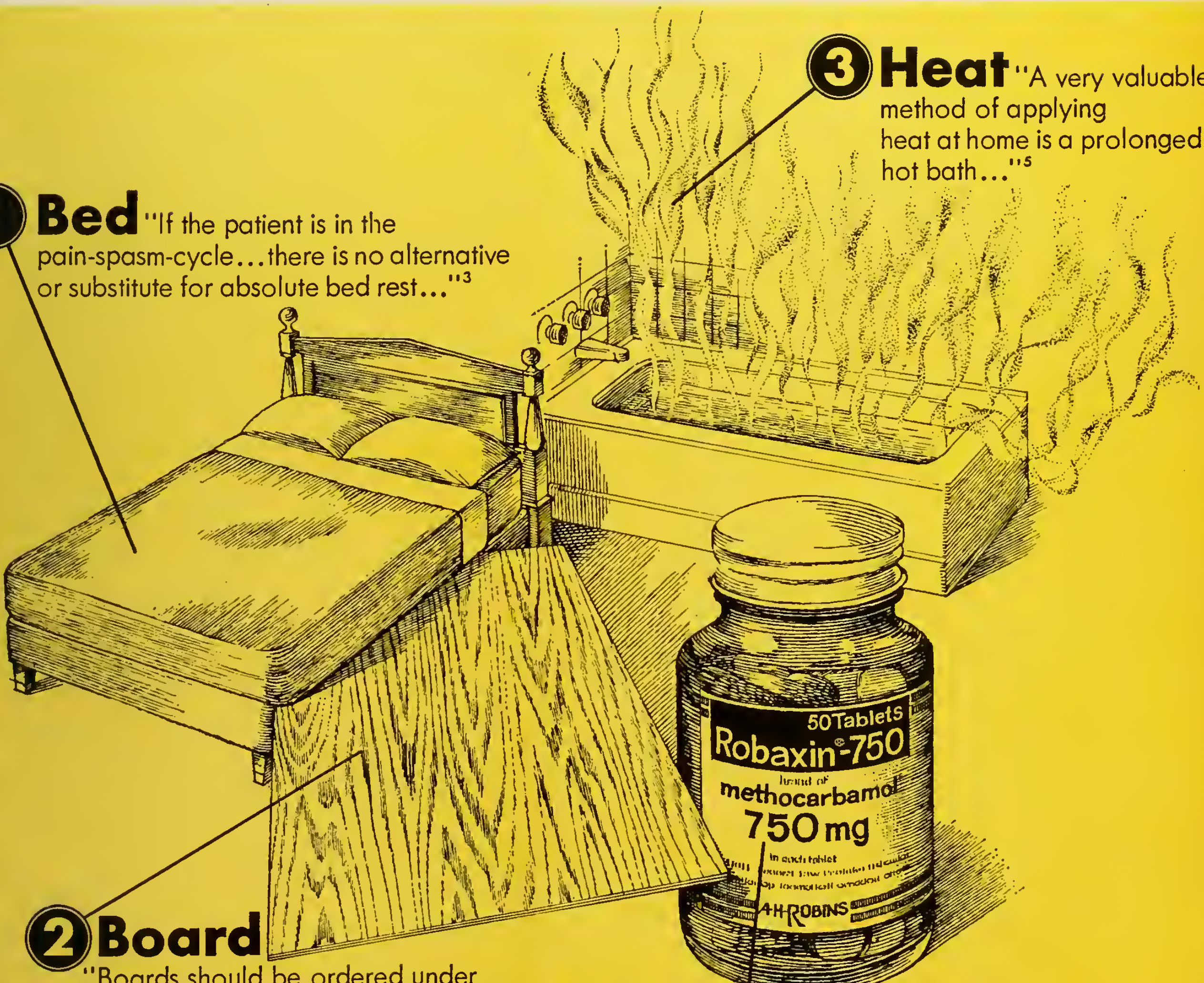
Sherman Laboratories

Detroit, Michigan 48211

LOW-BACK PAIN

A CONSERVATIVE, FOUR-POINT PROGRAM

The low back pain that is most frequently seen in general practice is mechanical in nature, i.e., postural back pain, joint dysfunction and acute back strain.[1,2] For this type of discomfort, a conservative regimen is usually sufficient to relieve aches and pains, and to help keep the patient functioning. Components of this basic program include:



① Bed "If the patient is in the pain-spasm-cycle...there is no alternative or substitute for absolute bed rest..."[3]

② Board "Boards should be ordered under the mattress...these boards act by immobilizing the spine..."[4]

③ Heat "A very valuable method of applying heat at home is a prolonged hot bath..."[5]

④ Robaxin®-750 (methocarbamol, 750 mg. capsule-shaped tablets) A well-tolerated[6] skeletal muscle relaxant, methocarbamol helps relieve spasm "...without interfering with normal tone and movement."[7] And there is little likelihood of sedation.[6]

Indicated for relief of skeletal muscle spasm. **Contraindicated in** hypersensitive patients. **Side Effects** (lightheadedness, dizziness, drowsiness, nausea) may occur rarely, but usually disappear on reduced dosage. Hypersensitivity reactions develop infrequently. See product literature for further details. **Also available:** Robaxin® Tablets (methocarbamol, 500 mg.) Robaxin Injectable (methocarbamol, 1 Gm./10 cc.) **References:** (1). Godfrey, C.M.: Applied Therap. 8:950, 1966. (2). Gottschalk, L.A.: GP 33:91, 1966. (3). Rowe, M.L.: J. Occup. Med. 2:219, 1960. (4). Cozen, L.: South Dakota J. Med. 18:26, 1965. (5). Soto-Hall, R.: Med. Sc. *14*:23, 1963. (6). Weiss, M. and Weiss, S.: J. Am. Osteopath. A. 62:142, 1962. (7). Feuer, S.G., *et al.*: New York J. Med. 62:1985, 1962.

A·H·ROBINS A. H. ROBINS COMPANY
RICHMOND, VIRGINIA 23220

"Yes, Doctor, the pain is gone."

'EMPIRIN'® COMPOUND with CODEINE PHOSPHATE gr. 1/2 No. 3

Each tablet contains: Codeine Phosphate gr. ½ (Warning – May be habit forming),
Phenacetin gr. 2½, Aspirin gr. 3½, Caffeine gr. ½.

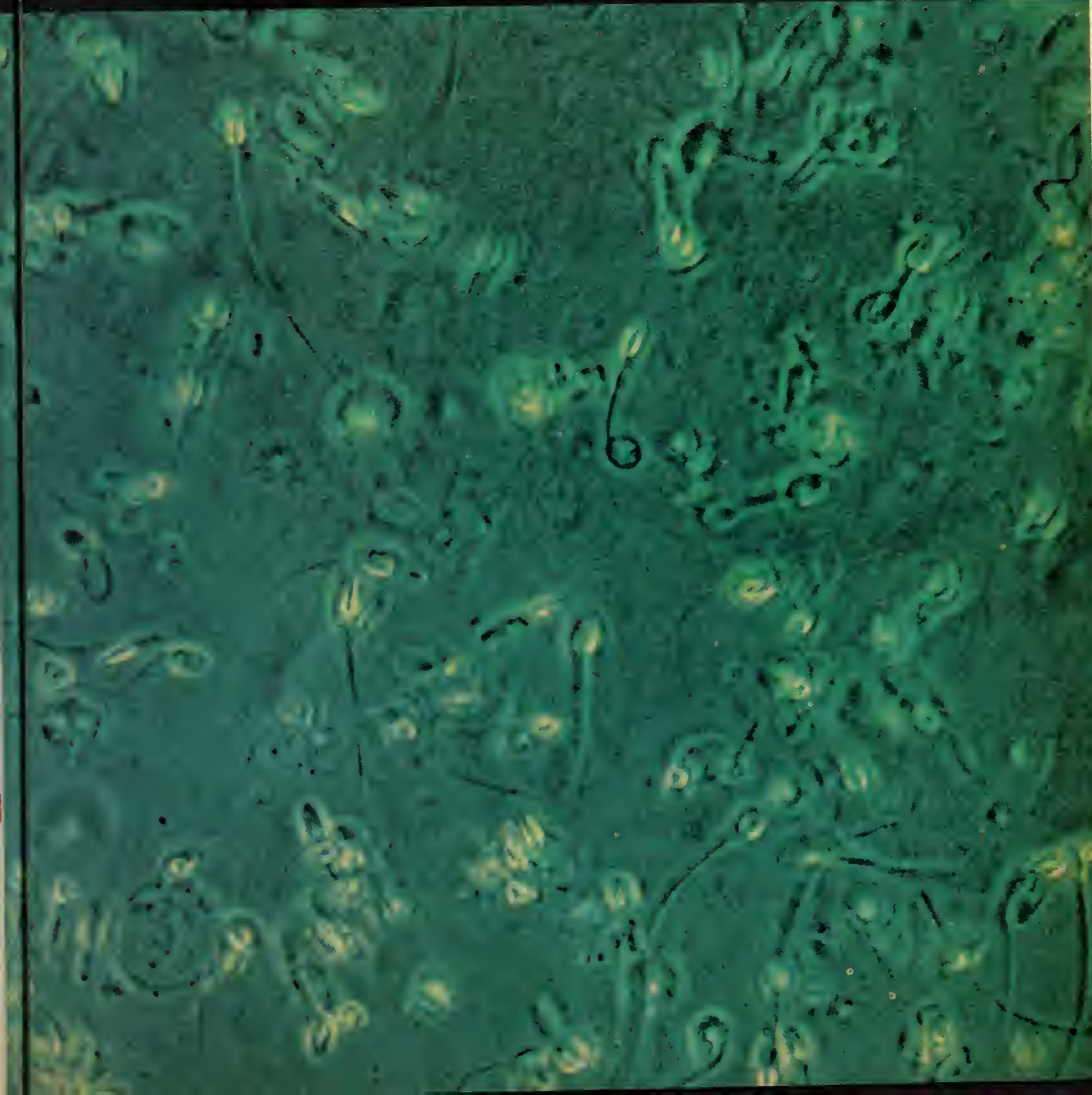
■ Despite introduction of synthetic substitutes, efficacy of 'Empirin'
Compound with Codeine remains unchallenged.

BURROUGHS WELLCOME & CO. (U.S.A.) INC., Tuckahoe, N.Y.

When the talk turns to oral contraceptives, it makes medical sense to remember low-dose Norinyl®-1.

(norethindrone 1mg. c̄ mestranol 0.05mg.)

Turn page for contraindications, precautions and side effects.



Reduction of oral contraceptive dosage to the lowest effective levels is a well-accepted principle of conservative medical practice. In keeping with this view, Norinyl is now also available as Norinyl-1, containing exactly one half the previous dosage of norethindrone and mestranol. Clinical experience has established that effective fertility control can be achieved with the same degree of reliability and safety with new Norinyl-1 when taken as directed.

What about switching patients from higher dosage forms?

In transferring patients to low-dose Norinyl-1 from higher-dosage oral contraceptives, some breakthrough bleeding may occur in the early cycles. In the majority of cases the bleeding episode is mild and self-limited. The long-term advantages of the lower dosage form should be weighed against the inconvenience of possible breakthrough bleeding in the individual patient.

Prescribing Information

Contraindications: Patients with any symptoms or history of thrombophlebitis, pulmonary embolism, liver dysfunction or disease, carcinoma of breast or genital organs, or undiagnosed vaginal bleeding.

Warnings: Discontinue medication pending examination if there is sudden partial or complete loss of vision, proptosis, diplopia or migraine. If examination reveals papilledema or retinal vascular lesions, medication should be withdrawn. The safety of Norinyl-1 in pregnancy has not been demonstrated. If a patient misses two consecutive periods, pregnancy should be ruled out before continuing the medication. If she has not adhered to the prescribed schedule, pregnancy should be considered at the first missed period. Active ingredients of oral contraceptives have been detected in the milk of mothers who received these drugs; the significance to infants has not been determined.

Precautions: Pretreatment physical should include examination of the breasts and pelvic organs, as well as a Papanicolaou smear. If endocrine or liver function tests are abnormal during therapy, repeat tests are recommended after the drug has been withdrawn for two months. Following administration of drug, preexisting uterine fibromyomata may increase in size. Careful observation and caution are required for patients with symptoms or history of epilepsy, migraine, asthma, cardiac or renal dysfunction, cerebrovascular accident, psychic depression, and diabetes. In cases of undiagnosed vaginal bleeding, adequate diagnostic measures are indicated. Possible long-term effects of the drug on pituitary, ovarian, adrenal, hepatic or uterine function must await further studies. The physician should be alert to the earliest manifestations of thrombophlebitis and pulmonary embolism. The drug should be used judiciously in those young patients in whom bone growth is not complete. The age of the patient constitutes no absolute limiting factor, although treatment with Norinyl-1 may mask symptoms of the climacteric. The pathologist should be advised of Norinyl-1 therapy when relevant specimens are submitted.

Side Effects: The following have been observed with varying incidence in patients receiving oral contraceptives: nausea, vomiting, gastrointestinal symptoms, breakthrough bleeding, spotting, change in menstrual flow, amenorrhea, edema, chloasma or melasma, breast changes (tenderness, enlargement and secretion), change in weight (increase or decrease), changes in cervical erosion and cervical secretions, suppression of lactation when given immediately postpartum, cholestatic jaundice, migraine, rash (allergic), rise in blood pressure in susceptible individuals, mental depression. Although the following side effects have been reported in users of oral contraceptives, no cause and effect relationship has been established: anovulation posttreatment, premenstruallike syndrome, changes in libido, changes in appetite, cystitis-like syndrome, headache, nervousness, dizziness, fatigue, backache, hirsutism, loss of scalp hair, erythema multiforme, erythema nodosum, hemorrhagic eruption, and itching. The following occurrences have been observed in users of oral contraceptives (a cause and effect relationship has neither been established nor disproved): thrombophlebitis, pulmonary embolism, neuroocular lesions.

The following laboratory tests may be altered by the use of oral contraceptives: increased sulfobromophthalein and other hepatic function tests, coagulation tests (increase in prothrombin, factors VII, VIII, IX and X), thyroid function (increase in PBI and butanol extractable protein-bound iodine and decrease in T^3 values), metyrapone test, pregnanediol determination.

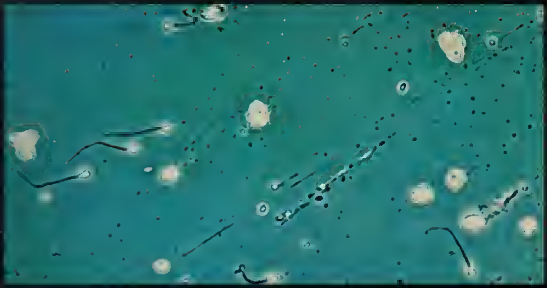
norethindrone — an original steroid from
SYNTEX
LABORATORIES INC., PALO ALTO, CALIF.

Here's why Norinyl-1 makes medical sense.

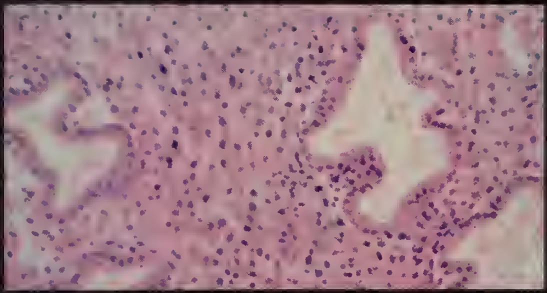
The effectiveness of Norinyl-1 as a low-dose oral contraceptive may be explained by its possible multiple action. In addition to its primary action of suppression of ovulation, Norinyl-1 may offer additional protective mechanisms... (1) creation of a cervical mucus that may be hostile to sperm penetration, and (2) development of an endometrium that may be out of phase with nidation. These effects are illustrated below.

Untreated Patient

Cervical mucus at midcycle is usually thin and watery, with Spinnbarkeit (stretchability) of 15 to 20 cm.

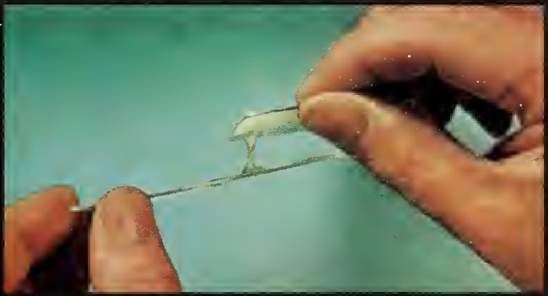


Spermatozoa appear healthy, active, freemoving.

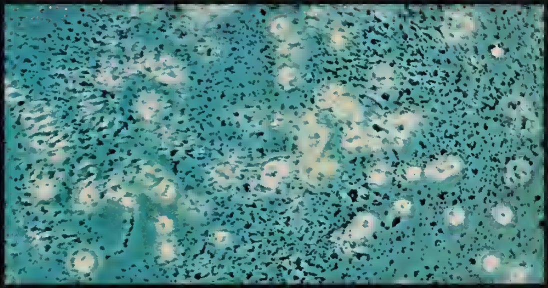


Endometrium of untreated patient is receptive to the fertilized ovum during secretory phase.

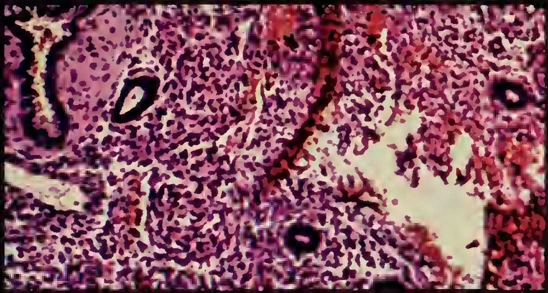
Norinyl-1 Patient



Cervical mucus at midcycle is scanty, viscous—with Spinnbarkeit of 1 cm. or less.



Immobile spermatozoa as they appear in cervical mucus taken from patient treated with Norinyl-1.



Norethindrone in Norinyl-1 accelerates secretory phase, suppresses glandular and vascular development.

Norinyl®-1 tablets
(norethindrone 1mg. c̄ mestranol 0.05mg.)

- new low dose of time-proved ingredients
- established norethindrone/mestranol ratio
- lower patient cost

An uncommon steroid for common inflammatory dermatoses

In everyday topical steroid therapy, Synalar produces rapid resolution of inflammation and itching in steroid-responsive dermatoses—and at relatively low cost to the patient.

Advanced molecular design enhances potency

Synalar combines the advantage of earlier corticosteroid compounds with unique structural innovations. As a result, preparations of Synalar 0.01% and Synalar 0.025% have been reported to be more potent topically and significantly more effective than hydrocortisone 1.0%. The unique fluocinolone acetonide molecule provides one of the most useful topical corticosteroids for everyday practice.

Impressive clinical results in a wide range of dermatologic problems

The clinical efficacy of Synalar has been extensively documented in the world literature. Commonly encountered diseases such as allergic and contact dermatitis, eczematous and seborrheic dermatitis, and neurodermatitis respond rapidly to Synalar, often where previous therapy with other topical corticosteroids has failed.

Low patient cost for wider usefulness

With Synalar, a high degree of efficacy does not mean high price. And—a small quantity goes a long way. Thus, your patients can often obtain the "economy" of a hydrocortisone preparation with the proved efficacy of a potent, truly advanced steroid.

Synalar®
fluocinolone acetonide

Turn page for contraindications, precautions and side effects

For everyday topical steroid therapy
Synalar® 0.01%
fluocinolone acetonide
provides economy in two practical dosage forms

For general use, the most economical and widely applicable concentration of Synalar is 0.01% Cream in a water-washable, vanishing cream base. Synalar Solution 0.01% is especially valuable in dermatoses involving moist, intertriginous areas or hairy sites where creams and ointments do not spread or penetrate readily. Synalar Solution is a unique dosage form—clear, nongreasy, cosmetically elegant.

Product Information

Contraindications: Tuberculous, fungal, and most viral lesions of the skin (including herpes simplex, vaccinia, and varicella). Not for ophthalmic use. Contraindicated in individuals with a history of hypersensitivity to any of the components. *Precautions:* Synalar preparations are virtually nonsensitizing and nonirritating. However, the solution may produce burning or stinging when applied to denuded or fissured areas. In some patients with dry lesions, the solution may increase dryness, scaling or itching. Where severe local infection or systemic infection exists, the use of systemic antibiotics should be considered, based on susceptibility testing. While topical steroids have not been reported to have an adverse effect on pregnancy, the safety of their use on pregnant females has not absolutely been established. Therefore, they should not be used extensively on pregnant patients, in large amounts, or for prolonged periods of time. *Side Effects:* Side effects are uncommon with topical corticosteroids. As with all drugs, however, a few patients may react unfavorably to Synalar under certain conditions. In such cases the agent should be discontinued and appropriate measures taken. *Availability:* Synalar (fluocinolone acetonide) Cream 0.025%—5, 15 and 60 Gm. tubes and 425 Gm. jars. Cream 0.01%—15, 45 and 60 Gm. tubes and 120 Gm. jars. Solution 0.01%—20 and 60 cc. plastic squeeze bottles. Ointment 0.025%—15 and 60 Gm. tubes. Neo-Synalar® (neomycin sulfate 0.5% [0.35% neomycin base], fluocinolone acetonide 0.025%) Cream—5, 15 and 60 Gm. tubes.

fluocinolone acetonide — an original steroid from
SYNTEX
LABORATORIES INC., PALO ALTO, CALIF

Dilantin®
(diphenylhydantoin)

PARKE-DAVIS

In untold thousands of epileptic patients... Dilantin has been, and continues to be, the bedrock of therapy.

DILANTIN is useful in the treatment of grand mal epilepsy and certain other convulsive states. Its use will prevent or greatly reduce the incidence and severity of convulsive seizures in a substantial percentage of epileptic patients, without the hypnotic and narcotizing effects of many anticonvulsant drugs.
PRECAUTIONS: Periodic examination of the blood is advisable. Nystagmus in combination with diplopia and ataxia indicates dosage should be reduced. The possibility of toxic effects during pregnancy has not been explored. ADVERSE REACTIONS: Allergic phenomena such as polyarthropathy, fever, skin eruptions, and acute generalized morbilliform eruptions with or without fever. Rarely, dermatitis goes on to exfoliation with hepatitis, and further dosage is contraindicated. Gingival hypertrophy, hirsutism, and excessive motor activity are occasionally encountered. During initial treatment, side effects may include gastric distress, nausea, weight loss, nervousness, sleeplessness, feeling of unsteadiness. Macrocytosis, megaloblastic anemia, leukopenia, granulocytopenia, thrombocytopenia, pancytopenia, agranulocytosis, and aplastic anemia have been reported. Nystagmus, lymphadenopathy, lupus erythematosus, erythema multiforme (Stevens-Johnson syndrome), and a syndrome resembling infectious mononucleosis with jaundice have occurred.
DILANTIN is supplied in several forms including Kapseals® containing 0.1 Gm. and 0.03 Gm. diphenylhydantoin sodium.
Parke, Davis & Company, Detroit, Michigan 48232

The color combinations of the banded capsules are Parke-Davis trademarks. The orange-banded white capsule identifies Parke-Davis 0.1 Gm. diphenylhydantoin sodium; the pink-banded white capsule 0.03 Gm. diphenylhydantoin sodium.

PARKE-DAVIS 015R67

Tears without grief

Crying Spells–psychic tension with depressive symptoms?

"I don't know what's the matter with me lately...I cry and I cry... and I really don't know why I do."

A woman often is not conscious of the real reasons for her crying spells or refuses to admit them to herself. On probing, you may find that frequent weeping, like insomnia or neurotic fatigue, often is an expression of psychic tension. She needs sympathy and reassurance, and perhaps a calming agent to help her over her crisis. Consider prescribing Valium (diazepam) for her. It usually reestablishes calmness promptly. Crying spells and other secondary depressive symptoms normally subside as the tension is relieved. Your patient then can cope more easily with stresses to which she is subjected. Valium (diazepam) is generally well tolerated, and on proper maintenance dosage usually does not impair mental acuity or ability to function. If side effects such as ataxia and drowsiness occur, they usually disappear with dosage adjustment.

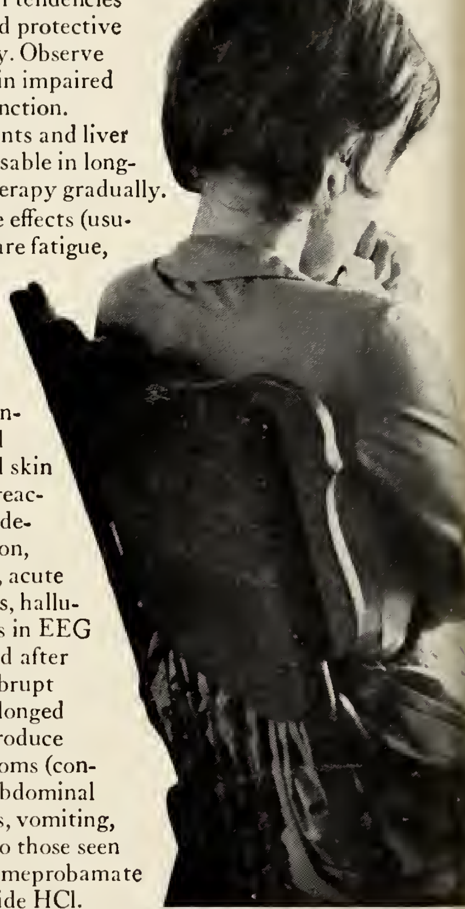
Before prescribing, please consult complete product information, a summary of which follows:

Contraindications: Infants, patients with history of convulsive disorders, glaucoma or known hypersensitivity to drug.

Warning: Not of value in the treatment of psychotic patients, and should not be employed in lieu of appropriate treatment.

Precautions: Limit dosage to smallest effective amount in elderly or debilitated patients (not more than 1 mg, one or two times daily initially) to preclude ataxia or oversedation, increasing gradually as needed or tolerated. As is true of all CNS-acting drugs, until correct maintenance dosage is established, advise patients against possibly hazardous procedures requiring complete mental alertness or physical coordination. Driving during therapy not recommended. In general, concurrent use with other psychotropic agents is not recommended. If such combination therapy is used, carefully consider individual pharmacologic effects–particularly with known compounds which may potentiate action of Valium (diazepam), such as phenothiazines, barbiturates, MAO inhibitors and other antidepressants. Advise patients against simultaneous ingestion of alcohol or other CNS depressants. Safe use in pregnancy not established. Employ usual precautions in treatment of anxiety states with evidence of impending depression; suicidal tendencies may be present and protective measures necessary. Observe usual precautions in impaired renal or hepatic function. Periodic blood counts and liver function tests advisable in long-term use. Cease therapy gradually.

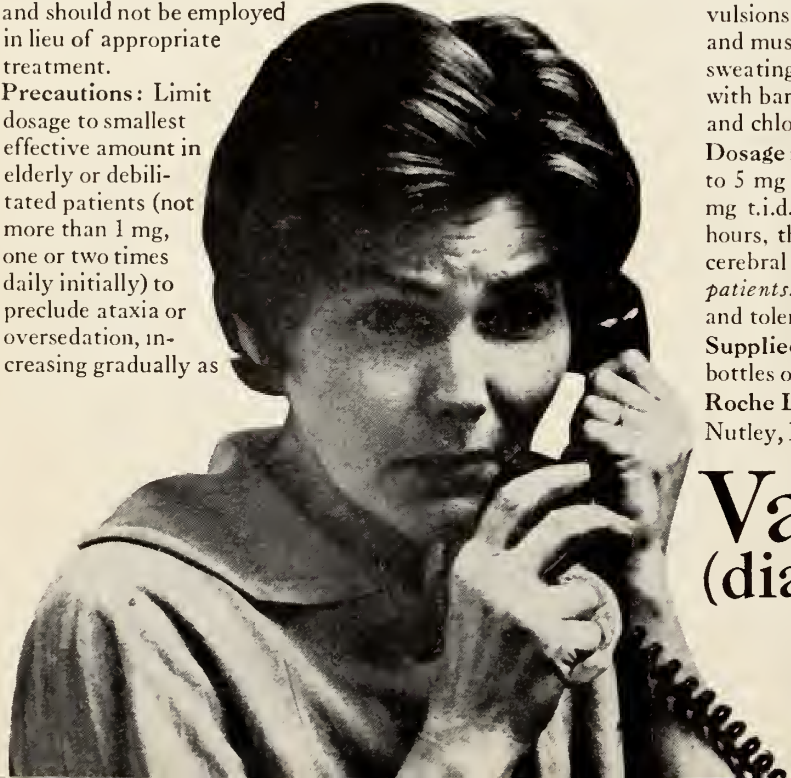
Side Effects: Side effects (usually dose-related) are fatigue, drowsiness and ataxia. Also reported: mild nausea, dizziness, blurred vision, diplopia, headache, incontinence, slurred speech, tremor and skin rash; paradoxical reactions (excitement, depression, stimulation, sleep disturbances, acute hyperexcited states, hallucinations); changes in EEG patterns during and after drug treatment. Abrupt cessation after prolonged overdosage may produce withdrawal symptoms (convulsions, tremor, abdominal and muscle cramps, vomiting, sweating) similar to those seen with barbiturates, meprobamate and chlordiazepoxide HCl.



Dosage: *Adults:* Mild to moderate psychoneurotic reactions, 2 to 5 mg b.i.d. or t.i.d.; severe psychoneurotic reactions, 5 to 10 mg t.i.d. or q.i.d.; alcoholism, 10 mg t.i.d. or q.i.d. in first 24 hours, then 5 mg t.i.d. or q.i.d. as needed; muscle spasm with cerebral palsy or athetosis, 2 to 10 mg t.i.d. or q.i.d. *Geriatric patients:* 1 or 2 mg/day initially, increase gradually as needed and tolerated. (See Precautions.)

Supplied: Valium® (diazepam) Tablets, 2 mg, 5 mg and 10 mg; bottles of 50 and 500.

Roche Laboratories, Division of Hoffmann-La Roche Inc.
Nutley, N. J. 07110



Valium®
(diazepam) Roche®

useful for the relief of psychic tension with associated depressive symptoms

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